



SPECIAL NOTICE
PUBLIC ATTENDANCE & PARTICIPATION AT PUBLIC MEETINGS
Operations Committee Meeting
Wednesday, May 1, 2024
5:00 p.m.

Your participation is always welcome. OC San offers several ways in which to interact during meetings. You will find information as to these opportunities below.

IN-PERSON MEETING ATTENDANCE

You may attend the meeting in-person at the following location:

Orange County Sanitation District
Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708

ONLINE MEETING PARTICIPATION

You may join the meeting live via Teams on your computer or similar device or web browser by using the link below:

[Click here to join the meeting](#)

We suggest testing joining a Teams meeting on your device prior to the commencement of the meeting. For recommendations, general guidance on using Teams, and instructions on joining a Teams meeting, [please click here](#).

Please mute yourself upon entry to the meeting. Please raise your hand if you wish to speak during the public comment section of the meeting. The Clerk of the Board will call upon you by using the name you joined with.

Meeting attendees are not provided the ability to make a presentation during the meeting. Please contact the Clerk of the Board at least 48 hours prior to the meeting if you wish to present any items. Additionally, camera feeds may be controlled by the meeting moderator to avoid inappropriate content.

HOW TO PARTICIPATE IN THE MEETING BY TELEPHONE

To join the meeting from your phone: Dial (213) 279-1455
When prompted, enter the Phone Conference ID: 141 552 529#

All meeting participants may be muted during the meeting to alleviate background noise. If you are muted, please use *6 to unmute. You may also mute yourself on your device.

Please raise your hand to speak by use *5, during the public comment section of the meeting. The Clerk of the Board will call upon you by using the last 4 digits of your phone number as identification.

NOTE: All attendees will be disconnected from the meeting at the beginning of Closed Session. If you would like to return to the Open Session portion of the meeting, please login or dial-in to the Teams meeting again and wait in the Lobby for admittance.

WATCH THE MEETING ONLINE

The meeting will be available for online viewing at:

<https://ocsd.legistar.com/Calendar.aspx>

SUBMIT A COMMENT

You may submit your comments and questions in writing for consideration in advance of the meeting by using the eComment feature available online at: <https://ocsd.legistar.com/Calendar.aspx> or sending them to OCSanClerk@ocsan.gov with the subject line "PUBLIC COMMENT ITEM # (insert the item number relevant to your comment)" or "PUBLIC COMMENT NON-AGENDA ITEM".

You may also submit comments and questions for consideration during the meeting by using the eComment feature available online at: <https://ocsd.legistar.com/Calendar.aspx>. The eComment feature will be available for the duration of the meeting.

All written public comments will be provided to the legislative body and may be read into the record or compiled as part of the record.

For any questions and/or concerns, please contact the Clerk of the Board's office at 714-593-7433. Thank you for your interest in OC San!

April 24, 2024

NOTICE OF REGULAR MEETING

OPERATIONS COMMITTEE ORANGE COUNTY SANITATION DISTRICT

Wednesday, May 1, 2024 – 5:00 P.M.

Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708

ACCESSIBILITY FOR THE GENERAL PUBLIC

Your participation is always welcome. Specific information as to how to participate in this meeting is detailed on the Special Notice attached to this agenda. In general, OC San offers several ways in which to interact during this meeting: you may participate in person, join the meeting live via Teams on your computer or similar device or web browser, join the meeting live via telephone, view the meeting online, and/or submit comments for consideration before or during the meeting.

The Regular Meeting of the Operations Committee of the Orange County Sanitation District will be held at the above location and in the manner indicated on Wednesday, May 1, 2024 at 5:00 p.m.



Clerk of the Board

Serving:

Anaheim

Brea

Buena Park

Cypress

Fountain Valley

Fullerton

Garden Grove

Huntington Beach

Irvine

La Habra

La Palma

Los Alamitos

Newport Beach

Orange

Placentia

Santa Ana

Seal Beach

Stanton

Tustin

Villa Park

County of Orange

Costa Mesa
Sanitary District

Midway City
Sanitary District

Irvine Ranch
Water District

Yorba Linda
Water District

OPERATIONS COMMITTEE MEETING DATE	BOARD MEETING DATE
05/01/24	05/22/24
06/05/24	06/26/24
07/10/24 *	07/24/24
AUGUST DARK	08/28/24
09/04/24	09/25/24
10/02/24	10/23/24
11/06/24	11/20/24 **
12/04/24	12/18/24 **
JANUARY DARK	01/22/25
02/05/25	02/26/25
03/05/25	03/26/25
04/02/25	04/23/25

**** Meeting will be held on the second Wednesday of the month***

***** Meeting will be held on the third Wednesday of the month***

ROLL CALL

OPERATIONS COMMITTEE Engineering and Operations & Maintenance

Meeting Date: May 1, 2024

Time: 5:00 p.m.

Adjourn: _____

COMMITTEE MEMBERS (14)

Jon Dumitru (Chair)	
Bob Ooten (Vice-Chair)	
Joyce Ahn	
Debbie Baker	
Doug Chaffee	
Stephen Faessel	
Phil Hawkins	
Johnathan Ryan Hernandez	
Stephanie Klopfenstein	
Scott Minikus	
Schelly Sustarsic	
Bruce Whitaker	
Chad Wanke (Board Chair)	
Ryan Gallagher (Board Vice-Chair)	

OTHERS

Brad Hogin, General Counsel	
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STAFF

Rob Thompson, General Manager	
Lorenzo Tyner, Assistant General Manager	
Mike Dorman, Director of Engineering	
Laura Maravilla, Director of Human Resources	
Riaz Moinuddin, Director of Operations & Maintenance	
Wally Ritchie, Director of Finance	
Lan Wiborg, Director of Environmental Services	
Kelly Lore, Clerk of the Board	

ORANGE COUNTY SANITATION DISTRICT
BOARD OF DIRECTORS
Complete Roster

Effective 01/23/2024

AGENCY/CITIES	ACTIVE DIRECTOR	ALTERNATE DIRECTOR
Anaheim	Stephen Faessel	Carlos A. Leon
Brea	Christine Marick	Cecilia Hupp
Buena Park	Joyce Ahn	Art Brown
Cypress	Scott Minikus	Bonnie Peat
Fountain Valley	Glenn Grandis	Ted Bui
Fullerton	Bruce Whitaker	Nick Dunlap
Garden Grove	Stephanie Klopfenstein	John O'Neill
Huntington Beach	Pat Burns	Gracey Van Der Mark
Irvine	Farrah N. Khan	Kathleen Treseder
La Habra	Rose Espinoza	Jose Medrano
La Palma	Debbie Baker	Mark I. Waldman
Los Alamitos	Jordan Nefulda	Shelley Hasselbrink
Newport Beach	Brad Avery	Erik Weigand
Orange	Jon Dumitru	John Gyllenhammer
Placentia	Chad Wanke	Ward Smith
Santa Ana	Johnathan Ryan Hernandez	Benjamin Vazquez
Seal Beach	Schelly Sustarsic	Lisa Landau
Stanton	David Shawver	Carol Warren
Tustin	Ryan Gallagher	Austin Lumbard
Villa Park	Robbie Pitts	Jordan Wu

Sanitary/Water Districts

Costa Mesa Sanitary District	Bob Ooten	Art Perry
Midway City Sanitary District	Andrew Nguyen	Tyler Diep
Irvine Ranch Water District	John Withers	Douglas Reinhart
Yorba Linda Water District	Phil Hawkins	Tom Lindsey

County Areas

Board of Supervisors	Doug Chaffee	Donald P. Wagner
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OPERATIONS COMMITTEE
Regular Meeting Agenda
Wednesday, May 1, 2024 - 5:00 PM
Board Room
Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708
(714) 593-7433

ACCOMMODATIONS FOR THE DISABLED: If you require any special disability related accommodations, please contact the Orange County Sanitation District (OC San) Clerk of the Board's office at (714) 593-7433 at least 72 hours prior to the scheduled meeting. Requests must specify the nature of the disability and the type of accommodation requested.

AGENDA POSTING: In accordance with the requirements of California Government Code Section 54954.2, this agenda has been posted outside the main gate of the OC San's Administration Building located at 10844 Ellis Avenue, Fountain Valley, California, and on the OC San's website at www.ocsan.gov not less than 72 hours prior to the meeting date and time above. All public records relating to each agenda item, including any public records distributed less than 72 hours prior to the meeting to all, or a majority of the Board of Directors, are available for public inspection in the office of the Clerk of the Board.

AGENDA DESCRIPTION: The agenda provides a brief general description of each item of business to be considered or discussed. The recommended action does not indicate what action will be taken. The Board of Directors may take any action which is deemed appropriate.

MEETING RECORDING: A recording of this meeting is available within 24 hours after adjournment of the meeting at <https://ocsd.legistar.com/Calendar.aspx> or by contacting the Clerk of the Board at (714) 593-7433.

NOTICE TO DIRECTORS: To place items on the agenda for a Committee or Board Meeting, the item must be submitted in writing to the Clerk of the Board: Kelly A. Lore, MMC, (714) 593-7433 / klore@ocsan.gov at least 14 days before the meeting.

FOR ANY QUESTIONS ON THE AGENDA, BOARD MEMBERS MAY CONTACT STAFF AT:

General Manager: Rob Thompson, rthompson@ocsan.gov / (714) 593-7110
Asst. General Manager: Lorenzo Tyner, ltyner@ocsan.gov / (714) 593-7550
Director of Engineering: Mike Dorman, mdorman@ocsan.gov / (714) 593-7014
Director of Environmental Services: Lan Wiborg, lwiborg@ocsan.gov / (714) 593-7450
Director of Finance: Wally Ritchie, writchie@ocsan.gov / (714) 593-7570
Director of Human Resources: Laura Maravilla, lmavilla@ocsan.gov / (714) 593-7007
Director of Operations & Maintenance: Riaz Moinuddin, rmoinuddin@ocsan.gov / (714) 593-7269

CALL TO ORDER**PLEDGE OF ALLEGIANCE****ROLL CALL AND DECLARATION OF QUORUM:**

Clerk of the Board

PUBLIC COMMENTS:

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REPORTS:

The Committee Chairperson and the General Manager may present verbal reports on miscellaneous matters of general interest to the Directors. These reports are for information only and require no action by the Directors.

CONSENT CALENDAR:

Consent Calendar Items are considered to be routine and will be enacted, by the Committee, after one motion, without discussion. Any items withdrawn from the Consent Calendar for separate discussion will be considered in the regular order of business.

1. APPROVAL OF MINUTES**[2024-3561](#)****RECOMMENDATION:**

Approve minutes of the Regular meeting of the Operations Committee held April 3, 2024.

Originator: Kelly Lore

Attachments: [Agenda Report](#)
[04-03-2024 Operations Committee Minutes](#)

2. QUARTERLY ODOR COMPLAINT REPORT**[2024-3572](#)****RECOMMENDATION:**

Receive and file the Fiscal Year 2023-24 Third Quarter Odor Complaint Report.

Originator: Riaz Moinuddin

Attachments: [Agenda Report](#)
[FY 2023-24 Third Quarter Odor Complaint Report](#)

3. COOPERATIVE PROCUREMENT WITH W.W. GRAINGER, INC. [2024-3573](#)

RECOMMENDATION: Recommend to the Board of Directors to:

Approve a Blanket Purchase Order with W.W. Grainger, Inc. (Grainger, Inc.) for the purchase of maintenance tools and supplies, utilizing the Sourcewell Cooperative Agreement No. 091422-WWG in accordance with Ordinance No. OC SAN-61, Section 2.03(B), for the period beginning July 1, 2024, through June 30, 2025, with three one-year renewal options, for a total amount not to exceed \$375,000 annually.

Originator: Riaz Moinuddin

Attachments: [Agenda Report](#)

NON-CONSENT:**4. ANNUAL PROFESSIONAL DESIGN SERVICES AGREEMENTS, [2024-3413](#)
CONTRACT NO. FE24-00-XX**

RECOMMENDATION: Recommend to the Board of Directors to:

- A. Approve Annual Professional Design Services Agreements (PDSA) with the following firms to provide professional engineering design and construction support services for a term of three (3) years commencing July 1, 2024 and expiring June 30, 2027, with a maximum annual fiscal year contract limitation not to exceed \$1,000,000 for each PDSA, and

FIRM	CONTRACT NO.
1. AtkinsRéalis USA, Inc.	FE24-00-01
2. Black and Veatch Corporation	FE24-00-02
3. Brown and Caldwell	FE24-00-03
4. Civiltec Engineering, Inc.	FE24-00-04
5. Dudek	FE24-00-05
6. GHD Inc.	FE24-00-06
7. Hazen and Sawyer	FE24-00-07
8. HDR Engineering, Inc.	FE24-00-08
9. Kennedy/Jenks Consultants, Inc.	FE24-00-09
10. Kleinfelder, Inc.	FE24-00-10
11. Lee & Ro, Inc.	FE24-00-11
12. Michael Baker International, Inc.	FE24-00-12
13. ProjectLine Technical Services, Inc.	FE24-00-13
14. SPEC Services, Inc.	FE24-00-14
15. Stantec Consulting Services, Inc.	FE24-00-15

- B. Approve two additional one-year optional extensions for each PDSA.

Originator: Mike Dorman

Attachments: [Agenda Report](#)
[FE24-00-01 PDSA - AtkinsRealis USA, Inc.](#)
[FE24-00-02 PDSA - Black and Veatch Corp](#)
[FE24-00-03 PDSA - Brown and Caldwell](#)
[FE24-00-04 PDSA - Civiltec Engineering, Inc.](#)
[FE24-00-05 PDSA - Dudek](#)
[FE24-00-06 PDSA - GHD Inc.](#)
[FE24-00-07 PDSA - Hazen and Sawyer](#)
[FE24-00-08 PDSA - HDR Engineering, Inc.](#)
[FE24-00-09 PDSA - Kennedy Jenks Consultants, Inc.](#)
[FE24-00-10 PDSA - Kleinfelder, Inc.](#)
[FE24-00-11 PDSA - Lee and Ro, Inc.](#)
[FE24-00-12 PDSA - Michael Baker International, Inc.](#)
[FE24-00-13 PDSA - ProjectLine Technical Services, Inc.](#)
[FE24-00-14 PDSA - SPEC Services, Inc.](#)
[FE24-00-15 PDSA - Stantec Consulting Services, Inc.](#)
[Presentation - FE24-00 Annual PDSA](#)

5. TAFT BRANCH IMPROVEMENTS, PROJECT NO. 2-49

[2023-3042](#)

RECOMMENDATION: Recommend to the Board of Directors to:

- A. Adopt Resolution No. OC SAN 24-XX entitled: “A Resolution of the Board of Directors of the Orange County Sanitation District adopting the mitigated negative declaration for the Taft Avenue Sewer Improvement Project, Project No. 2-49; adopting a mitigation monitoring and reporting program; and approving the Taft Branch Improvements, Project No. 2-49” which (1) adopts the Initial Study / Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program for the Taft Avenue Sewer Improvement Project, Project No. 2-49, prepared by Woodard & Curran Inc.; (2) approves the project; and (3) directs staff to file a Notice of Determination pursuant to the California Environmental Quality Act;
- B. Approve a project budget increase of \$3,900,000 for Taft Branch Improvements, Project No. 2-49, for a new total project budget of \$31,200,000;
- C. Receive and file the Bid Tabulation and Recommendation for Taft Branch Improvements, Project No. 2-49;
- D. Award a Construction Contract Agreement to Big Ben Inc. for Taft Branch Improvements, Project No. 2-49, for a total amount not to exceed \$20,458,250;
- E. Approve a contingency of \$2,045,825 (10%);
- F. Approve the Sewer Transfer Agreement between Orange County Sanitation District and the City of Orange, in a form approved by General Counsel; and

direct the Clerk of the Board to record the document with the Orange County Clerk-Recorder's office; and

- G. Approve the Memorandum of Understanding between Orange County Sanitation District and the City of Orange for the Construction and Transfer of Sewer Facilities in Conjunction with Project No. 2-49.

Originator: Mike Dorman

Attachments: [Agenda Report](#)
[Resolution No. OC SAN 24-XX](#)
[Final Initial Study and Mitigated Negative Declaration](#)
[Mitigation Monitoring and Reporting Program](#)
[2-49 Construction Contract Agreement Package](#)
[Sewer Transfer Agreement - City of Orange](#)
[MOU - City of Orange](#)
[Presentation - 2-49 Contract Award](#)

6. TAFT BRANCH IMPROVEMENTS, PROJECT NO. 2-49

[2023-3044](#)

RECOMMENDATION: Recommend to the Board of Directors to:

- A. Approve a Professional Construction Services Agreement with Woodard & Curran Inc. to provide construction support services for Taft Branch Improvements, Project No. 2-49, for a total amount not to exceed \$1,108,033; and
- B. Approve a contingency of \$110,803 (10%).

Originator: Mike Dorman

Attachments: [Agenda Report](#)
[2-49 Draft PCSA Package](#)

INFORMATION ITEMS:

7. CONSTRUCTION CHANGE ORDER GOALS AND CONTINGENCY RECOMMENDATIONS

[2024-3566](#)

RECOMMENDATION:

Information Item.

Originator: Mike Dorman

Attachments: [Agenda Report](#)
[Presentation - CM Goals](#)

8. **CAPITAL IMPROVEMENT PROGRAM PROPOSED BUDGET FOR FY [2024-3395](#)
2024-25 & 2025-26**

RECOMMENDATION:

Information Item.

Originator: Mike Dorman

Attachments: [Agenda Report](#)
[Presentation - CIP Budget FY24-25 FY25-26](#)

DEPARTMENT HEAD REPORTS:

CLOSED SESSION:

None.

OTHER BUSINESS AND COMMUNICATIONS OR SUPPLEMENTAL AGENDA ITEMS, IF ANY:

BOARD OF DIRECTORS INITIATED ITEMS FOR A FUTURE MEETING:

At this time Directors may request staff to place an item on a future agenda.

ADJOURNMENT:

Adjourn the meeting until the Regular Meeting of the Operations Committee on June 5, 2024 at 5:00 p.m.



OPERATIONS COMMITTEE

Agenda Report

Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708
(714) 593-7433

File #: 2024-3561

Agenda Date: 5/1/2024

Agenda Item No: 1.

FROM: Robert Thompson, General Manager
Originator: Kelly A. Lore, Clerk of the Board

SUBJECT:

APPROVAL OF MINUTES

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION:

Approve minutes of the Regular meeting of the Operations Committee held April 3, 2024.

BACKGROUND

In accordance with the Board of Directors Rules of Procedure, an accurate record of each meeting will be provided to the Directors for subsequent approval at the following meeting.

RELEVANT STANDARDS

- Resolution No. OC SAN 22-37

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- April 3, 2024 Operations Committee meeting minutes



CALL TO ORDER

A regular meeting of the Operations Committee of the Orange County Sanitation District was called to order by Committee Chairman Jon Dumitru on Wednesday, April 3, 2024 at 5:00 p.m. in the Administration Building of the Orange County Sanitation District. Director Stephanie Klopfenstein led the pledge of allegiance.

ROLL CALL AND DECLARATION OF QUORUM:

Assistant Clerk of the Board Jackie Castro declared a quorum present as follows:

PRESENT: Joyce Ahn, Debbie Baker, Doug Chaffee, Jon Dumitru, Ryan Gallagher, Stephen Faessel, Johnathan Ryan Hernandez, Stephanie Klopfenstein, Scott Minikus, Robert Ooten, Schelly Sustarsic, Chad Wanke and Bruce Whitaker

ABSENT: Phil Hawkins

STAFF PRESENT: Rob Thompson, General Manager; Lorenzo Tyner, Assistant General Manager; Mike Dorman, Director of Engineering; Laura Maravilla, Director of Human Resources; Riaz Moinuddin, Director of Operations and Maintenance; Wally Ritchie, Director of Finance; Lan Wiborg, Director of Environmental Services; Jackie Castro, Assistant Clerk of the Board; Mo Abiodun; Jennifer Cabral; Tanya Chong; Raul Cuellar; Thys DeVries; Martin Dix; Brian Engeln; Justin Fenton; Al Garcia; Hardat Khublall; Marianne Kleine; Kelly Lore; Shahrzad Namini; Giti Radvar; Valerie Ratto; Kevin Schuler; Bob Tran; Milind Wable; and Ruth Zintzun were present in the Board Room. Rob Michaels was present telephonically.

OTHERS PRESENT: Brad Hogin, General Counsel; Jim Clark, Black & Veatch; and Mike Puccio, Brown and Caldwell, were present in the Board Room. Nathan Chase and Doug Lanning, Carollo Engineers, Inc., were present telephonically.

PUBLIC COMMENTS:

None.

REPORTS:

Chair Dumitru and General Manager Rob Thompson did not provide a report.

CONSENT CALENDAR:**1. APPROVAL OF MINUTES**[2024-3522](#)**Originator:** Kelly Lore

MOVED, SECONDED, AND DULY CARRIED TO:

Approve minutes of the Regular meeting of the Operations Committee held March 6, 2024.

AYES: Joyce Ahn, Debbie Baker, Doug Chaffee, Jon Dumitru, Ryan Gallagher, Stephen Faessel, Stephanie Klopfenstein, Scott Minikus, Robert Ooten, Schelly Sustarsic, Chad Wanke and Bruce Whitaker**NOES:** None**ABSENT:** Phil Hawkins and Johnathan Ryan Hernandez**ABSTENTIONS:** None**2. REFURBISHMENT OF COMBINATION SEWER CLEANING TRUCK**[2024-3533](#)**Originator:** Riaz Moinuddin

MOVED, SECONDED, AND DULY CARRIED TO: Recommend to the Board of Directors to:

A. Approve a Sole Source Purchase Order to Haaker Equipment Company to refurbish one Combination Sewer Cleaning Truck for a total amount not to exceed \$300,320; and

B. Approve a contingency of \$45,048 (15%).

AYES: Joyce Ahn, Debbie Baker, Doug Chaffee, Jon Dumitru, Ryan Gallagher, Stephen Faessel, Stephanie Klopfenstein, Scott Minikus, Robert Ooten, Schelly Sustarsic, Chad Wanke and Bruce Whitaker**NOES:** None**ABSENT:** Phil Hawkins and Johnathan Ryan Hernandez**ABSTENTIONS:** None**3. POWER BUILDINGS 7 AND 8 HVAC REPLACEMENT AT PLANT NO. 1, PROJECT NO. FE23-08**[2024-3532](#)**Originator:** Riaz Moinuddin

MOVED, SECONDED, AND DULY CARRIED TO: Recommend to the Board of Directors to:

A. Approve a Purchase Order and a Master Turnkey Agreement with Trane U.S. Inc. for the Power Buildings 7 and 8 HVAC Replacement at Plant No. 1, Project No. FE23-08, utilizing the OMNIA Partners Cooperative Purchasing Agreement, Contract No. 3341, for a total amount not to exceed \$687,708; and

B. Approve a contingency of \$34,386 (5%).

AYES: Joyce Ahn, Debbie Baker, Doug Chaffee, Jon Dumitru, Ryan Gallagher, Stephen Faessel, Stephanie Klopfenstein, Scott Minikus, Robert Ooten, Schelly Sustarsic, Chad Wanke and Bruce Whitaker

NOES: None

ABSENT: Phil Hawkins and Johnathan Ryan Hernandez

ABSTENTIONS: None

NON-CONSENT:

4. DIGESTER GAS COMPRESSOR DRYER REPLACEMENTS AT PLANT NO. 1 AND PLANT NO. 2, PROJECT NO. FE23-01 [2023-3183](#)

Originator: Mike Dorman

Director of Engineering Mike Dorman provided a brief report of the item.

MOVED, SECONDED, AND DULY CARRIED TO: Recommend to the Board of Directors to:

A. Approve a Services Contract to Innovative Construction Solutions for Specification No. S-2023-1432BD Digester Gas Compressor Dryer Replacements at Plant No. 1 and Plant No. 2, Project No. FE23-01, for a total amount not to exceed \$5,942,500; and

B. Approve a contingency of \$594,250 (10%).

AYES: Joyce Ahn, Debbie Baker, Doug Chaffee, Jon Dumitru, Ryan Gallagher, Stephen Faessel, Stephanie Klopfenstein, Scott Minikus, Robert Ooten, Schelly Sustarsic, Chad Wanke and Bruce Whitaker

NOES: None

ABSENT: Phil Hawkins and Johnathan Ryan Hernandez

ABSTENTIONS: None

5. LOS ALAMITOS SUB-TRUNK AND WESTSIDE RELIEF INTERCEPTOR REHABILITATION, PROJECT NO. 3-64C [2024-3490](#)

Originator: Mike Dorman

MOVED, SECONDED, AND DULY CARRIED TO: Recommend to the Board of Directors to:

Approve an agreement with Forest Lawn Memorial-Park Association for construction access and staging, sewer installation, and pavement rehabilitation in coordination with the Los Alamitos Sub-Trunk and Westside Relief Interceptor Rehabilitation, Project No. 3-64C for an amount payable to Orange County Sanitation District not to exceed \$813,000.

AYES: Joyce Ahn, Debbie Baker, Doug Chaffee, Jon Dumitru, Ryan Gallagher, Stephen Faessel, Stephanie Klopfenstein, Scott Minikus, Robert Ooten, Schelly Sustarsic, Chad Wanke and Bruce Whitaker

NOES: None

ABSENT: Phil Hawkins and Johnathan Ryan Hernandez

ABSTENTIONS: None

INFORMATION ITEMS:

6. FY 2024-25 AND 2025-26 OPERATING BUDGET EXPENDITURES [2024-3380](#)

Originator: Wally Ritchie

Director of Finance Wally Ritchie introduced the item and introduced Finance and Procurement Manager Ruth Zintzun who provided a PowerPoint presentation regarding FY 2024-25 and FY 2025-26 operating budget expenditures. The presentation included an overview of various expenditures including sales, wages, and benefits; repairs and maintenance; operating materials and supplies; contractual services; utilities; professional services; and other expenses. The presentation also included an overview of cost allocation, a summary of operating expenses, and key meeting dates.

ITEM RECEIVED AS AN:

Information Item.

Director Johnathan Ryan Hernandez arrived at the meeting at 5:24 p.m.

7. TPAD DIGESTER FACILITY AT PLANT NO. 2, PROJECT NO. P2-128 [2024-3535](#)

Originator: Mike Dorman

Mr. Dorman provided a PowerPoint presentation regarding an update on the TPAD Digester Facility at Plant No. 2, Project No. P2-128. The presentation included an overview of the Plant No. 2 anaerobic digesters, Class A versus Class B biosolids, the 2017 biosolids master plan, the current biosolids program, a summary of construction cost increases, a review of the TPAD project approach, the phase 1 and phase 2 digestion processes, TPAD phasing, future project phasing, and a budget overview.

ITEM RECEIVED AS AN:

Information Item.

DEPARTMENT HEAD REPORTS:

Mr. Dorman advised the Committee of an emergency response that took place over the weekend which involved sewer blockage resulting from damage in the pipe lining. He stated that the impacted sewer line is located in Anaheim along Orange Avenue and reported that the incident did not cause a sewer spill. Mr. Dorman expressed his gratitude for the OC San staff involved in the response and repair of the sewer line.

CLOSED SESSION:

None.

OTHER BUSINESS AND COMMUNICATIONS OR SUPPLEMENTAL AGENDA ITEMS, IF ANY:

None.

BOARD OF DIRECTORS INITIATED ITEMS FOR A FUTURE MEETING:

None.

ADJOURNMENT:

Chair Dumitru declared the meeting adjourned at 5:35 p.m. to the next Regular Operations Committee meeting to be held on Wednesday, May 1, 2024 at 5:00 p.m.

Submitted by:

Jackie Castro, CMC
Assistant Clerk of the Board



OPERATIONS COMMITTEE

Agenda Report

Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708
(714) 593-7433

File #: 2024-3572

Agenda Date: 5/1/2024

Agenda Item No: 2.

FROM: Robert Thompson, General Manager
Originator: Riaz Moinuddin, Director of Operations & Maintenance

SUBJECT:

QUARTERLY ODOR COMPLAINT REPORT

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION:

Receive and file the Fiscal Year 2023-24 Third Quarter Odor Complaint Report.

BACKGROUND

During the third quarter of FY 2023-24, the Orange County Sanitation District (OC San) had the following attributable odor complaints: Plant No. 1 had two odor complaints, Plant No. 2 had zero odor complaints, and the collection system had one odor complaint. A summary of the odor complaints with a table tracking the history is included as an attachment.

RELEVANT STANDARDS

- Five or fewer odor incidents/events under normal operating conditions for Plant Nos. 1 and 2
- Operate and maintain facilities to minimize impacts on surrounding communities, including odor, noise, and lighting
- 12 or fewer odor complaints per year under normal operating conditions in the collection system

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- FY 2023-24 Third Quarter Odor Complaint Report

RS:BR:cf

Orange County Sanitation District

Odor Complaint Report

Fiscal Year 2023/24 – 3rd Quarter

1. Plant No. 1 Treatment Facility Odor Complaint Summary

Plant No. 1 received two attributable odor complaints during the 3rd quarter. The complaints were reported by the same resident. The staff investigation identified truckloading as the source of the odor complaints. Trickling filters were also recognized as a source of the odor during a tour arranged for the resident. The trickling filter flow set point is monitored closely to prevent odor complaints. Air balancing, solids-loading protocols enforcement, and process isolation by closing the doors are considered to avoid odor complaints from the truckloading process.

Plant No. 2 Treatment Facility Odor Complaint Summary

Plant No. 2 received zero attributable odor complaints during the 3rd Quarter.

2. Collections Facilities Odor Complaint Summary

The collection system received one attributable odor complaint during the 3rd Quarter. The odor complaint was due to the pressurization and sewer ventilation of foul odors escaping the manhole covers during siphon maintenance. The covers have been sealed to reduce sewer odor and prevent further complaints. The odor complaint originated in the City of Costa Mesa.

All Odor Complaints Tracking

	Jan. 2024 to Mar. 2024			1 st Qtr FY 23/24	2 nd Qtr FY 23/24	3 rd Qtr FY 23/24	4 th Qtr FY 23/24	Cumulative FY 23/24
All Public Complaints	Collections	P1	P2	Total	Total	Total	Total	Total
Attributable to OC San	1	2	0	6	5	3		14
Not Attributable to OC San	2	8	0	12	20	10		42
Total Public Complaints Received:	3	10	0	18	25	13		56

OPERATIONS COMMITTEE

Agenda Report

File #: 2024-3573

Agenda Date: 5/1/2024

Agenda Item No: 3.

FROM: Robert Thompson, General Manager
Originator: Riaz Moinuddin, Director of Operations & Maintenance

SUBJECT:

COOPERATIVE PROCUREMENT WITH W.W. GRAINGER, INC.

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION: Recommend to the Board of Directors to:

Approve a Blanket Purchase Order with W.W. Grainger, Inc. (Grainger, Inc.) for the purchase of maintenance tools and supplies, utilizing the Sourcewell Cooperative Agreement No. 091422-WWG in accordance with Ordinance No. OC SAN-61, Section 2.03(B), for the period beginning July 1, 2024, through June 30, 2025, with three one-year renewal options, for a total amount not to exceed \$375,000 annually.

BACKGROUND

In order to properly maintain and repair Orange County Sanitation District (OC San) facilities, the Operations and Maintenance Department requires miscellaneous parts and supplies which may be one-time purchases or purchased infrequently such that it is not appropriate to stock them in OC San's warehouse.

RELEVANT STANDARDS

- Participate in local, state, and national cooperative purchasing programs
- Maintain a culture of improving efficiency to reduce the cost to provide the current service level or standard

PROBLEM

The current Blanket Purchase Order with Grainger, Inc. expires on June 30, 2024. Without this agreement in place, procurement of parts and supplies necessary for day-to-day repairs could be delayed, resulting in higher individual procurement costs.

PROPOSED SOLUTION

Approve a Blanket Purchase Order with Grainger, Inc., through Sourcewell Cooperative Agreement (091422-WWG), thereby allowing quick procurement and stable pricing of necessary small tools and equipment for day-to-day repairs.

TIMING CONCERNS

N/A

RAMIFICATIONS OF NOT TAKING ACTION

Increased time to procure needed parts and supplies, and potential higher costs.

PRIOR COMMITTEE/BOARD ACTIONS

May 2023 - Approved a Blanket Purchase Order with W.W. Grainger, Inc. (Grainger, Inc.) for the purchase of maintenance tools and supplies, utilizing the National Association of State Procurement Officials (NASPO) Master Agreement No. 8496, for the period beginning July 1, 2023, through June 30, 2024, for a total amount not to exceed \$300,000.

February 2020 - Approved a Blanket Purchase Order with W.W. Grainger, Inc. for the purchase of maintenance tools and supplies, in accordance with Ordinance No. OCSD-52, Section 2.03(B): Cooperative Procurement; for the period beginning March 1, 2020, through February 28, 2021, with two one-year renewal options, for a total amount not to exceed \$275,000 per year.

ADDITIONAL INFORMATION

Grainger, Inc. has participated in NASPO agreements for Cooperative Contract Pricing for eight years. NASPO agreements are available to all State of California governmental entities (e.g., state agencies, cities, counties, special districts, school districts, and universities) that expend public funds for the acquisition of both goods and services. OC San is currently utilizing NASPO Master Agreement No. 8496 with Grainger, Inc., pursuant to Ordinance No. OC SAN-61, Section 2.03(B), Cooperative Purchases.

CEQA

N/A

FINANCIAL CONSIDERATIONS

This request complies with authority levels of OC San's Purchasing Ordinance. This recommendation will be funded under the Plant No. 1 and Plant No. 2 Maintenance Department, Budget Update 2023-24, Page 39. The available funding is sufficient for this action.

<u>Date of Approval</u>	<u>Contract Amount</u>	<u>Contingency</u>
05/22/2024	\$ 375,000	\$0

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

N/A

RM:ls



OPERATIONS COMMITTEE

Agenda Report

Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708
(714) 593-7433

File #: 2024-3413

Agenda Date: 5/1/2024

Agenda Item No: 4.

FROM: Robert Thompson, General Manager
Originator: Mike Dorman, Director of Engineering

SUBJECT:

ANNUAL PROFESSIONAL DESIGN SERVICES AGREEMENTS, CONTRACT NO. FE24-00-XX

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION: Recommend to the Board of Directors to:

- A. Approve Annual Professional Design Services Agreements (PDSA) with the following firms to provide professional engineering design and construction support services for a term of three (3) years commencing July 1, 2024 and expiring June 30, 2027, with a maximum annual fiscal year contract limitation not to exceed \$1,000,000 for each PDSA, and

FIRM	CONTRACT NO.
1. AtkinsRéalis USA, Inc.	FE24-00-01
2. Black and Veatch Corporation	FE24-00-02
3. Brown and Caldwell	FE24-00-03
4. Civiltec Engineering, Inc.	FE24-00-04
5. Dudek	FE24-00-05
6. GHD Inc.	FE24-00-06
7. Hazen and Sawyer	FE24-00-07
8. HDR Engineering, Inc.	FE24-00-08
9. Kennedy/Jenks Consultants, Inc.	FE24-00-09
10. Kleinfelder, Inc.	FE24-00-10
11. Lee & Ro, Inc.	FE24-00-11
12. Michael Baker International, Inc.	FE24-00-12
13. ProjectLine Technical Services, Inc.	FE24-00-13
14. SPEC Services, Inc.	FE24-00-14
15. Stantec Consulting Services, Inc.	FE24-00-15

- B. Approve two additional one-year optional extensions for each PDSA.

BACKGROUND

The Orange County Sanitation District (OC San) Purchasing Ordinance authorizes procurement of professional design services less than \$500,000 through task order-based Annual PDSAs. The Annual PDSAs limit task orders awarded to a single firm in a fiscal year to \$1,000,000. There are currently four sets of Annual PDSAs for design services issued in 2012, 2015, 2018, and 2021. The

sets for 2012, 2015, and 2018 have expired, and the set from 2021 expires on June 30, 2024. When an Annual PDSA expires, any existing and active task orders remain valid, but no new task orders can be issued.

When the need for professional design services for a specific project are identified, and the anticipated value of the services is less than the \$500,000 task order limit, staff issues a request for task order proposals to prequalified firms. The proposals are scored and ranked per the selection criteria included in the request for task order proposals, and negotiations are conducted with the selected firm. The process of procuring design services through task orders is significantly quicker and more cost effective for both OC San and the competing consultants than issuing stand-alone agreements.

RELEVANT STANDARDS

- Sound engineering and accounting practices, complying with local, state, and federal laws
- Comply with California Government Code §4526 and select “on the basis of demonstrated competence and on the professional qualifications necessary for the satisfactory performance of the services required”

PROBLEM

The process of soliciting and selecting consultants for individual PSDAs on smaller projects is slower and costlier for both OC San and the consultants competing for projects.

PROPOSED SOLUTION

Approve Annual PDSAs with a prequalified list of design consultants per the Purchasing Ordinance. The following table lists project types for which each of the consultants are prequalified.

	Firm	Type 1: Site Works, Building and Safety	Type 2: Linear and Collections	Type 3: Process, Electrical and I&C
1.	AtkinsRéalis USA, Inc.			X
2.	Black and Veatch Corporation		X	X
3.	Brown and Caldwell	X	X	X
4.	Civiltec Engineering, Inc.	X	X	
5.	Dudek	X	X	X
6.	GHD Inc.		X	X
7.	Hazen and Sawyer	X	X	X
8.	HDR Engineering, Inc.	X	X	X
9.	Kennedy/Jenks Consultants, Inc.		X	X
10.	Kleinfelder, Inc.		X	
11.	Lee & Ro, Inc.		X	X

12.	Michael Baker International, Inc.		X	X
13.	ProjectLine Technical Services, Inc.	X		X
14.	SPEC Services, Inc.			X
15.	Stantec Consulting Services, Inc.	X	X	X

TIMING CONCERNS

The current Annual PDSAs expire on June 30, 2024. If new Annual PDSAs are not issued, staff will not be able to issue task orders to procure design services for small projects.

RAMIFICATIONS OF NOT TAKING ACTION

Without these Annual PDSAs, OC San would need to conduct full solicitations for the design of each small project, delaying completion of those projects, and increasing administrative costs. The relatively high proposal costs versus the potential project profit tends to limit the number of proposers for these smaller projects.

PRIOR COMMITTEE/BOARD ACTIONS

N/A

ADDITIONAL INFORMATION

Consultant Selection:

On December 20, 2023, OC San issued a request for qualifications (RFQs) for Annual PDSAs, Contract No. FE24-00, and a notice was sent to multiple categories of firms registered in OC San's purchasing database. The RFQs defined three categories of projects and invited interested consultants to pursue qualifications for any or all of those categories.

The following evaluation criterion were described in the RFQ and used to determine the most qualified consultants.

CRITERION	WEIGHT
Consultant Team Resources	20%
Delivery Capabilities	20%
Related Project Experience	30%
Staff Qualifications	30%

On February 13, 2024, 20 statements of qualifications (SOQs) were received. The following table lists the firms that submitted SOQs and for which project types they submitted qualifications.

	Firm	Type 1: Site Works, Building, and Safety	Type 2: Linear and Collections	Type 3: Process, Electrical and I&C
1.	AtkinsRéalis USA, Inc.		X	X
2.	Black and Veatch Corporation		X	X
3.	Brown and Caldwell	X	X	X
4.	Civiltec Engineering, Inc.	X	X	X
5.	Dahl, Taylor & Associates, Inc.	X		X
6.	Dudek	X	X	X
7.	GHD Inc.		X	X
8.	Hazen and Sawyer	X	X	X
9.	HDR Engineering, Inc.	X	X	X
10.	IDS Group, Inc.	X		
11.	Kennedy/Jenks Consultants, Inc.		X	X
12.	Kleinfelder, Inc.		X	X
13.	Lee & Ro, Inc.		X	X
14.	Lockwood Andrews and Newman, Inc.		X	
15.	Michael Baker International, Inc.		X	X
16.	P2S Inc.	X		X
17.	ProjectLine Technical Services, Inc.	X		X
18.	SPEC Services, Inc.			X
19.	Stantec Consulting Services, Inc.	X	X	X
20.	The Austin Company	X		
Total SOQs Submitted Per Project Type		11	14	17

The SOQs were evaluated in accordance with the process set forth in the Purchasing Ordinance by a preselected Evaluation Committee consisting of two Engineering Supervisors and one Engineer. The Evaluation Committee also included two non-voting representatives from the Contracts Administration Division.

Each member of the Evaluation Committee scored each SOQ for each project type submitted using the evaluation criterion listed above. The following tables summarize the scoring and ranking for each project type.

PROJECT TYPE 1: SITE WORKS, BUILDING, and SAFETY

Site Works, Building, and Safety projects are those where most of the work involves general civil, building, occupied spaces, or safety improvements. These projects are usually located at either of

OC San's two treatment plants or one of 15 off-site pump stations. Of the 11 firms submitting qualifications for these projects, the Evaluation Committee recommended seven firms be awarded annual PDSAs.

Firm	Consultant Team Resources (max. 20)	Delivery Capabilities (max. 20)	Related Project Experience (max. 30)	Staff Qualifications (max. 30)	Total Score (max. 100)	Rank
Stantec Consulting Services, Inc.	18.7	18.7	27.0	27.0	91.4	1
HDR Engineering, Inc.	18.0	18.7	28.0	26.0	90.7	2
Brown and Caldwell	19.3	19.3	22.0	24.0	84.6	3
Dudek	18.7	19.3	21.0	23.0	82.0	4
ProjectLine Technical Services, Inc.	16.0	18.0	23.0	23.0	80.0	5
Hazen and Sawyer	18.0	17.3	18.0	26.0	79.3	6
Civiltec Engineering, Inc.	14.7	13.3	26.0	24.0	78.0	7
IDS Group, Inc.	12.0	15.3	24.0	19.0	70.3	8
The Austin Company	13.3	13.3	21.0	22.0	69.6	9
Dahl, Taylor & Associates, Inc.	12.7	9.3	24.0	18.0	64.0	10
P2S Inc.	8.7	10.0	13.0	14.0	45.7	11

PROJECT TYPE 2: LINEAR and COLLECTIONS

Linear and Collections projects are those where most of the work involves installation, rehabilitation, or repair of buried piping outside of the two treatment plants. Of the 14 firms submitting qualifications for these projects, the Evaluation Committee recommended 12 firms be awarded annual PDSAs.

Firm	Consultant Team Resources (max. 20)	Delivery Capabilities (max. 20)	Related Project Experience (max. 30)	Staff Qualifications (max. 30)	Total Score (max. 100)	Rank
Dudek	18.7	20.0	29.0	27.0	94.7	1
Stantec Consulting Services, Inc.	18.7	18.7	28.0	28.0	93.4	2
HDR Engineering, Inc.	18.0	18.7	28.0	28.0	92.7	3
Michael Baker International, Inc.	19.3	18.7	27.0	27.0	92.0	4
GHD Inc.	18.0	18.7	28.0	27.0	91.7	5
Brown and Caldwell	18.7	19.3	27.0	26.0	91.0	6
Black and Veatch Corporation	11.3	20.0	28.0	26.0	85.3	7
Kennedy/Jenks Consultants, Inc.	16.7	16.7	24.0	26.0	83.4	8

Lee & Ro, Inc.	16.0	16.0	26.0	25.0	83.0	9
Hazen and Sawyer	18.0	17.3	22.0	24.0	81.3	10
Kleinfelder, Inc.	17.3	17.3	22.0	23.0	79.6	11
Civiltec Engineering, Inc.	14.7	13.3	26.0	24.0	78.0	12
AtkinsRéalis USA, Inc.	14.0	15.3	20.0	23.0	72.3	13
Lockwood Andrews and Newman, Inc.	13.3	14.7	20.0	19.0	67.0	14

PROJECT TYPE 3: PROCESS, ELECTRICAL, and INSTRUMENTATION and CONTROL

Process, Electrical, and Instrumentation and Control projects are usually located at either of the two treatment plants or one of 15 off-site pump stations. Of the 17 firms submitting qualifications for these projects, the Evaluation Committee recommended 13 firms be awarded annual PDSAs.

Firm	Consultant Team Resources (max. 20)	Delivery Capabilities (max. 20)	Related Project Experience (max. 30)	Staff Qualifications (max. 30)	Total Score (max. 100)	Rank
Brown and Caldwell	19.3	19.3	28.0	30.0	96.6	1
Stantec Consulting Services, Inc.	18.7	18.7	28.0	28.0	93.4	2
HDR Engineering, Inc.	18.0	18.7	28.0	28.0	92.7	3
Dudek	18.7	20.0	26.0	27.0	91.7	4
Michael Baker International, Inc.	19.3	18.7	25.0	27.0	90.0	5
Black and Veatch Corporation	12.7	20.0	27.0	30.0	89.7	6
GHD Inc.	18.0	18.7	26.0	26.0	88.7	7
Hazen and Sawyer	18.0	17.3	26.0	25.0	86.3	8
Lee & Ro, Inc.	16.0	16.0	27.0	26.0	85.0	9
SPEC Services, Inc.	16.7	18.7	26.0	23.0	84.4	10
Kennedy/Jenks Consultants, Inc.	16.7	16.7	25.0	25.0	83.4	11
ProjectLine Technical Services, Inc.	16.0	18.0	22.0	21.0	77.0	12
AtkinsRéalis USA, Inc.	14.0	15.3	24.0	23.0	76.3	13
Kleinfelder, Inc.	17.3	17.3	18.0	16.0	68.6	14
Civiltec Engineering, Inc.	14.7	13.3	19.0	19.0	66.0	15
Dahl, Taylor & Associates, Inc.	12.7	9.3	22.0	22.0	66.0	16
P2S Inc.	8.7	10.0	17.0	17.0	52.7	17

CEQA

N/A

FINANCIAL CONSIDERATIONS

This request complies with authority levels of OC San's Purchasing Ordinance. This item has been budgeted (Budget Update, Fiscal Year 2023-2024, Appendix A, Page 8, Small Construction Projects Program, Project No. M-FE) and the budget is sufficient for the recommended action.

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- Professional Design Services Agreements
- Presentation

MD:tk

PROFESSIONAL DESIGN SERVICES AGREEMENT

This PROFESSIONAL DESIGN SERVICES AGREEMENT (Agreement), to be effective this 1st day of July, 2024, is made and entered into by and between:

ORANGE COUNTY SANITATION DISTRICT
hereinafter referred to as "OC San"

AND

ATKINSRÉALIS USA, INC.
hereinafter referred to as "CONSULTANT"

individually referred to as the "Party" and collectively as the "Parties".

RECITALS

WHEREAS, in accordance with Ordinance No. OC SAN-61 and pursuant to a Request for Qualifications ("Underlying RFQ"), the Board of Directors of OC San, by action on May 22, 2024, approved the award of the Agreement for **CONTRACT NO. FE24-00-01**, to CONSULTANT to provide services for selected projects on a task order (Task Order) basis from July 1, 2024 to June 30, 2027; and

WHEREAS, consistent with the Underlying RFQ, the CONSULTANT has been prequalified to perform services for the following project type: Project Type 3: Process, Electrical and Instrumentation & Control (I&C); and

WHEREAS, for Task Orders estimated to cost \$100,000 or less, the Director of Engineering, with concurrence of the Purchasing Manager, may solicit a proposal from one (1) firm on the prequalified list, which will include the project types for which the consultants are prequalified; and

WHEREAS, the CONSULTANT is qualified to provide and has agreed to provide the necessary professional engineering and related services under this Agreement; and

WHEREAS, by this Agreement, the Parties intend to set forth the general terms and conditions that will apply to any specific project for which CONSULTANT is given a Task Order by OC San.

NOW, THEREFORE, OC San and the CONSULTANT mutually agree as follows:

SECTION 1. SCOPE OF AGREEMENT

OC San, at its sole discretion, may, from time to time during the term of this Agreement, issue a Request for Task Order Proposal ("RFTOP") setting forth the detailed requirements and scope of work to be performed on the identified project and thereafter, upon receipt of a proposal from the CONSULTANT, may issue a Task Order to proceed with the work. The scope of work will be in a form attached hereto as Attachment "A" – Sample Scope of Work.

Upon execution by OC San, the Task Order shall become an operative part of this Agreement. Should any conflict or inconsistency exist in the contract documents identified in this section, the conflict or inconsistency shall be resolved by applying the provisions in the highest priority document, which shall be determined in the following order of priority:

1. Agreement and any amendments thereto
2. the Task Order
3. the RFTOP

SECTION 2. TASK ORDER ISSUANCE BY OC SAN

The Task Order issued by OC San shall, specifically or by reference to the RFTOP and corresponding proposal, set forth the terms that will apply to the specific project for which the services will be rendered. Those terms shall include, but not be limited to, scope of work, time for performance, and compensation.

SECTION 3. TERM

This Agreement shall commence on the effective date of this Agreement and terminate on June 30, 2027, unless further extended by written agreement signed by the Parties. Any work that is required by a Task Order and is not finished by the date of termination shall be continued and completed by the CONSULTANT and the terms and conditions of this Agreement shall continue in effect for that time. OC San may, at its option, renew this Agreement for two (2) additional terms of one (1) year each, for a maximum contract duration of five (5) years.

SECTION 4. COMPENSATION

The total compensation payable to the CONSULTANT pursuant to this Agreement shall not exceed One Million Dollars (\$1,000,000) per year in accordance with the terms described in SECTION 3 - TERM. The compensation includes, but is not limited to, fees for professional engineering services based on the CONSULTANT's burdened labor rates, overhead, and profit, and fees from the CONSULTANT's subconsultants/subcontractors (Subconsultants/Subcontractors). The specific amount of compensation payable to the CONSULTANT for services rendered on an individual project, pursuant to a Task Order, shall be established for each Task Order and shall not exceed Five Hundred Thousand Dollars (\$500,000) per individual Task Order unless authorized by OC San's Board of Directors. The CONSULTANT agrees and acknowledges that the execution of this Agreement does not in any way guarantee that a Task Order will be issued to the CONSULTANT. Moreover, execution of this Agreement shall not entitle the CONSULTANT to any form of payment or compensation from OC San without OC San first having issued a written Task Order.

A. Total Compensation

Total compensation for any Task Order shall not exceed the amount indicated in the approved Task Order and any approved amendments thereto.

B. Labor

As a portion of the total compensation to be paid to CONSULTANT, OC San shall pay to CONSULTANT a sum equal to the burdened salaries (salaries plus benefits) actually paid

by CONSULTANT charged on an hourly-rate basis to the project and paid to CONSULTANT's personnel. For each Task Order, the cost of benefits for CONSULTANT shall be based on the fringe rates identified in Attachment "E" – Rates Proposal. Upon request of OC San, CONSULTANT shall provide OC San with certified payroll records of all employees' work that is charged to the project.

C. Overhead

As a portion of the total compensation to be paid to CONSULTANT, for each Task Order, OC San shall compensate CONSULTANT for overhead at the rates equal to the percentage of burdened labor as specified in Attachment "E" – Rates Proposal.

D. Profit

For each Task Order, profit shall be ten percent (10%) of burdened labor and overhead for all CONSULTANT fees and its Major Subconsultants (Architecture & Engineering [A&E] consulting services) whose fees for services are greater than or equal to \$100,000. Profit shall remain fixed through the term of this Agreement, inclusive of any renewals identified in Section 3 – TERM.

As a portion of the total compensation to be paid to CONSULTANT and its Major Subconsultants, OC San shall pay profit for all services rendered by CONSULTANT and its Major Subconsultants for the Task Order as specified in the previous paragraph.

E. Subconsultants

For each Task Order, any Minor Subconsultant (A&E consulting services) whose fees for services are less than \$100,000 and any Subconsultant/Subcontractor (non-A&E consulting services), CONSULTANT shall pay to Subconsultant/Subcontractor total compensation based on an established hourly rate schedule by personnel classification. The hourly rates shall cover burdened salary costs, overhead and profit. The compensation for each Minor Subconsultants and Subconsultants/Subcontractors (non-A&E consulting services), including both labor related fees, and direct costs shall not exceed the amount, as negotiated prior to award of a Task Order.

For each Task Order, any Major Subconsultant (A&E consulting services) whose fees for services are greater than or equal to \$100,000, total compensation for labor will be based on burdened labor rates, overhead, and profit, as negotiated prior to award of Task Order. Prior to award of Task Order, the CONSULTANT shall provide to OC San, if available, an audit performed for another public agency which documents the Major Subconsultant's labor burden rate and overhead rate. This audit shall be the most current available and have been conducted for a period that ended within twelve months of the task order proposal due date. This information shall be provided by CONSULTANT within ten (10) business days from request by OC San.

F. Direct Costs

OC San shall reimburse CONSULTANT and its Subconsultants/Subcontractors the actual costs of permits and associated fees, travel, licenses, and other services in an amount not to exceed the sums set forth in each approved Task Order. OC San shall also pay to CONSULTANT actual costs for equipment rentals, leases or purchases with prior written

approval of OC San. Upon request, CONSULTANT shall provide to OC San receipts and other documentary records to support CONSULTANT's request for reimbursement of these amounts, refer to Attachment "D" – Allowable Direct Costs. All incidental expenses shall be included in the overhead cost pursuant to this SECTION 4 – COMPENSATION.

G. Other Direct Costs

OC San will reimburse the CONSULTANT for Other Direct Costs incurred by CONSULTANT and its Subconsultants/Subcontractors due to modifications in the scope of work resulting from field investigations and field work required by the Task Order. These items may include special equipment, test equipment and tooling, and other materials and services not previously identified. Refer to Attachment "D" – Allowable Direct Costs for payment information.

H. Reimbursable Direct Costs

OC San will reimburse the CONSULTANT for reasonable travel and business expenses as described in this section and further described in Attachment "D" – Allowable Direct Costs. The reimbursement of the above-mentioned expenses will be based on an "accountable plan" as considered by the Internal Revenue Service (IRS). The plan includes a combination of reimbursements based upon receipts and a "per diem" component approved by the IRS. The most recent schedule of the per diem rates utilized by OC San may be found on the U.S. General Services Administration website at <https://www.gsa.gov/travel/plan-book/per-diem-rates>.

The CONSULTANT shall be responsible for the most economical and practical means of management of reimbursable costs inclusive, but not limited to, travel, lodging, and meals arrangements. OC San shall apply the most economic and practical method of reimbursement which may include reimbursements based upon receipts and/or "per diem" as deemed the most practical.

CONSULTANT shall be responsible for returning to OC San any excess reimbursements after the reimbursement has been paid by OC San.

Travel and travel arrangements – Any travel involving airfare, overnight stays, or multiple day attendance must be approved by OC San in advance.

Local travel is considered travel by the CONSULTANT within OC San general geographical area which includes Orange, Los Angeles, Ventura, San Bernardino, Riverside, San Diego, Imperial, and Kern Counties. Automobile mileage is reimbursable if CONSULTANT is required to utilize a personal vehicle for local travel.

Lodging – Overnight stays will not be approved by OC San for local travel. However, under certain circumstances overnight stay may be allowed at the discretion of OC San based on reasonableness of meeting schedules and the amount of time required for travel by the CONSULTANT. Such determination will be made on a case-by-case basis and at the discretion of OC San.

Travel Meals – Per diem rates as approved by the IRS shall be utilized for travel meals reimbursements. Per diem rates shall be applied to meals that are appropriate for travel times. Receipts are not required for the approved meals.

Additional details related to the reimbursement of the allowable direct costs are provided in Attachment "D" – Allowable Direct Costs.

I. Limitation of Costs

If, at any time, CONSULTANT estimates the cost of performing the services described in CONSULTANT's proposal will exceed seventy-five percent (75%) of the not to exceed amount of the Task Order, including any approved additional compensation, CONSULTANT shall notify OC San immediately, in writing. The written notice shall indicate the additional amount necessary to complete the services. Any cost incurred in excess of the approved not to exceed amount, without the express written consent of OC San's authorized representative, shall be at CONSULTANT's own risk. This written notice shall be provided separately from, and in addition to, any notification requirements contained in the CONSULTANT's invoice and monthly progress report. Failure to notify OC San that the services cannot be completed within the authorized not to exceed amount of a Task Order is a material breach of this Agreement.

J. Method of Payment:

The CONSULTANT shall submit for approval by OC San, monthly invoices based on the total services which have been satisfactorily completed and specifying a percentage of completion. The CONSULTANT's billings shall be certified for payment by OC San only after OC San has determined that the CONSULTANT has completed each applicable project task.

CONSULTANT shall submit separate invoices for each Task Order on a monthly basis.

CONSULTANT understands that submitted costs are subject to Section 11 - AUDIT PROVISIONS, below.

K. Task Order Completion

Upon satisfactory completion by CONSULTANT of the work called for under the terms of the Task Order and upon acceptance of such work by OC San, CONSULTANT will be paid the unpaid balance of any money due for such work.

Upon satisfactory completion of the work performed under each Task Order and prior to final payment under each Task Order for such work or prior settlement upon termination of this Agreement, and as a condition precedent thereto, CONSULTANT shall execute and deliver to OC San a release of all claims against OC San arising under or by virtue of this Agreement other than such claims, if any, as may be specifically exempted by CONSULTANT from the operation of the release in stated amounts to be set forth therein.

L. False Claims

Pursuant to the California False Claims Act (Government Code Sections 12650-12655), any CONSULTANT that knowingly submits a false claim to OC San for compensation under the terms of this Agreement may be held liable for treble damages and up to a Ten Thousand Dollars (\$10,000) civil penalty for each false claim submitted. This section shall also be binding on all Subconsultants/Subcontractors.

The CONSULTANT or its Subconsultants/Subcontractors shall be deemed to have submitted a false claim when the CONSULTANT or its Subconsultants/Subcontractors: (a) knowingly presents or causes to be presented to an officer or employee of OC San a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by OC San; (c) conspires to defraud OC San by getting a false claim allowed or paid by OC San; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to OC San; or (e) is a beneficiary of an inadvertent submission of a false claim to OC San and fails to disclose the false claim to OC San within a reasonable time after discovery of the false claim.

M. California Department of Industrial Relations (DIR) Registration and Record of Wages:

To the extent the CONSULTANT's employees and/or its Subconsultants/Subcontractors who will perform work during the design, preconstruction, and construction phases of a construction contract for which Prevailing Wage Determinations have been issued by the DIR and as more specifically defined under Labor Code Section 1720 et seq., CONSULTANT and its Subconsultants/Subcontractors shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4, the work is subject to compliance monitoring and enforcement by the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776 and shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Penalties for non-compliance with the requirements of Labor Code section 1776 may be deducted from progress payments per Labor Code section 1776.

Pursuant to Labor Code section 1776, the CONSULTANT and its Subconsultants/Subcontractors shall furnish a copy of all certified payroll records to OC San and/or general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 16461(e).

N. Record of Expenses:

The CONSULTANT shall keep complete and accurate records of all costs and expenses incidental to services covered by this Agreement. Such records will be made available to OC San upon request.

O. Reallocation of Total Compensation:

OC San, by its Director of Engineering, shall have the right to approve a reallocation of the incremental amounts constituting the total compensation payable under the Task Order, provided that the total compensation for the Task Order is not increased.

SECTION 5. LIMITATIONS UPON SUBCONTRACTING AND ASSIGNMENT

The CONSULTANT shall not contract with any other person or entity to perform the services required without the written approval of OC San. This Agreement may not be assigned voluntarily or by operation of law without the prior written approval of OC San. If the CONSULTANT is permitted to subcontract any part of this Agreement by OC San, the CONSULTANT shall be responsible to OC San for the acts and omissions of its Subconsultant/Subcontractor, as it is for persons directly employed by the CONSULTANT. Nothing contained in this Agreement shall create any contractual relationship between any Subconsultant/Subcontractor and OC San. All persons engaged in the work will be considered employees of the CONSULTANT. OC San will deal directly with and will make all payments to the CONSULTANT.

SECTION 6. CHANGES TO SCOPE OF WORK

In the event of a change in the scope of work as requested by OC San or any other changes to the Task Order, the Parties shall execute an amendment to the Task Order setting forth with particularity all new terms of the Task Order, including, but not limited to, any additional compensation.

SECTION 7. DOCUMENT OWNERSHIP – CONSULTANT PERFORMANCE

- A. All documents in all forms (electronic, paper, etc.), including, but not limited to, studies, sketches, drawings, computer printouts, disk files, and electronic copies prepared in connection with or related to the scope of work shall be the property of OC San. OC San's ownership of these documents includes use of, reproduction or reuse of, and all incidental rights, whether or not the work for which they were prepared has been performed. OC San's ownership entitlement arises upon payment or any partial payment for work performed and includes ownership of any and all work product completed prior to that payment. This section shall apply whether the CONSULTANT's services are satisfied by the completion of the Agreement or are terminated in accordance with other provisions of this Agreement. Notwithstanding any other provision of this section or Agreement, the CONSULTANT shall have the right to make copies of all such plans, studies, sketches, drawings, computer printouts and disk files, and specifications.
- B. CONSULTANT shall not be responsible for damage caused by subsequent changes to or uses of the deliverables where the subsequent changes or uses are not authorized or approved by CONSULTANT, provided that the service rendered by CONSULTANT was not a proximate cause of the damage.
- C. Copies of Work Product

Upon completion of the work required for each Task Order, the CONSULTANT shall deliver to OC San the number of copies specified in the specific Task Order scope of work of the final report containing the CONSULTANT's findings, conclusions, recommendations, and all supporting documentation and/or final design drawings and specifications. Each Task Order will define the requirements for the deliverables.

SECTION 8. INSURANCE

A. General:

- i. Insurance shall be issued and underwritten by insurance companies acceptable to OC San.
- ii. Insurers must have an "A-" Policyholder's Rating, or better, and Financial Rating of at least Class VIII, or better, in accordance with the most current A.M. Best's Guide Rating. However, OC San will accept State Compensation Insurance Fund for the required policy of Worker's Compensation Insurance subject to OC San's option to require a change in insurer in the event the State Fund financial rating is decreased below "B". Further, OC San will require CONSULTANT to substitute any insurer whose rating drops below the levels herein specified. Said substitution shall occur within twenty (20) days of written notice to CONSULTANT by OC San or its agent.
- iii. Coverage shall be in effect prior to the commencement of any work under this Agreement.

B. General Liability:

The CONSULTANT shall maintain during the life of this Agreement, including the period of warranty, Commercial General Liability Insurance written on an occurrence basis providing the following minimum limits of liability coverage: Two Million Dollars (\$2,000,000) per occurrence with Four Million Dollars (\$4,000,000) aggregate. If aggregate limits apply separately to this Agreement (as evidenced by submission of ISO form CG 25 03 or CG 25 04), then the aggregate limit may be equivalent to the per occurrence limit. Said insurance shall include coverage for the following hazards: Premises-Operations, blanket contractual liability (for this Agreement), products liability/completed operations (including any product manufactured or assembled), broad form property damage, blanket contractual liability, independent contractors liability, personal and advertising injury, mobile equipment, owners and contractors protective liability, and cross liability and severability of interest clauses. A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement(s). If requested by OC San and applicable, XCU coverage (Explosion, Collapse and Underground) and Riggers/On Hook Liability must be included in the General Liability policy and coverage must be reflected on the submitted Certificate of Insurance.

C. Umbrella Excess Liability:

The minimum limits of general liability and automobile liability insurance required, as set forth herein, shall be provided for through either a single policy of primary insurance or a combination of policies of primary and umbrella excess coverage. Umbrella excess liability coverage shall be issued with limits of liability which, when combined with the primary insurance, will equal the minimum limits for general liability and automobile liability.

D. Automobile/Vehicle Liability Insurance:

The CONSULTANT shall maintain a policy of automobile liability insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and other vehicles providing the following minimum limit of liability coverage: combined single limit of One Million Dollars (\$1,000,000). A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement.

E. Drone Liability Insurance:

If a drone will be used, drone liability insurance must be maintained by the CONSULTANT in the amount of One Million Dollars (\$1,000,000) in a form acceptable to OC San.

F. Worker's Compensation Insurance:

The CONSULTANT shall provide such Workers' Compensation Insurance as required by the Labor Code of the State of California in the amount of the statutory limit, including Employer's Liability Insurance with a minimum limit of One Million Dollars (\$1,000,000) per occurrence. Such Worker's Compensation Insurance shall be endorsed to provide for a waiver of subrogation in favor of OC San. A statement on an insurance certificate will not be accepted in lieu of the actual endorsements unless the insurance carrier is the State of California Insurance Fund and the identifier "SCIF" and applicable endorsements are referenced on the certificate of insurance. If an exposure to Jones Act liability may exist, the insurance required herein shall include coverage for Jones Act claims.

G. Errors and Omissions/Professional Liability:

The CONSULTANT shall maintain in full force and effect, throughout the term of this Agreement, standard industry form professional liability/errors and omissions insurance coverage with coverage limits of not less than Two Million Dollars (\$2,000,000) in accordance with the provisions of this paragraph. If the policy of insurance is written on a "claims made" basis, said policy shall be continued in full force and effect at all times during the term of this Agreement and for a period of five (5) years from the date of the completion of the services hereunder.

In the event of termination of said policy during this period, the CONSULTANT shall obtain continuing insurance coverage for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement. Said coverage shall be evidenced by either a new policy evidencing no gap in coverage or by separate extended "tail" coverage with the present or new carrier.

In the event the present policy of insurance is written on an "occurrence" basis, said policy shall be continued in full force and effect during the term of this Agreement or until completion of the services provided for in this Agreement, whichever is later. In the event of termination of said policy during this period, new coverage shall be obtained for the required period to insure for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement.

The CONSULTANT shall provide to OC San a certificate of insurance in a form acceptable to OC San indicating the deductible or self-retention amounts and the expiration date of said policy and shall provide renewal certificates not less than ten (10) days prior to the expiration of each policy term.

H. Proof of Coverage:

The CONSULTANT shall furnish OC San with original certificates and amendatory endorsements effecting coverage. Said policies and endorsements shall conform to the requirements herein stated. All certificates and endorsements must be received and accepted by OC San before work commences. OC San reserves the right to require, at any time, complete, certified copies of all required insurance policies, including endorsements, effecting the coverage required. The following are approved forms that must be submitted as proof of coverage:

- | | |
|--|--|
| • Certificate of Insurance | ACORD Form 25 or other equivalent Certificate of Insurance form |
| • Additional Insurance (General Liability) | The combination of (ISO Forms) CG 2010 <u>and</u> CG 2037 |
| | All other additional insured endorsements must be submitted for approval by OC San and OC San may reject alternatives that provide different or less coverage to OC San. |
| • Additional Insured (Auto Liability) | Submit Endorsement provided by carrier for OC San's approval. |
| • Waiver of Subrogation | Submit workers' compensation waiver of subrogation endorsement provided by carrier for OC San's approval. |
| • Cancellation Notice | No endorsement is required. However, Vendor/Contractor is responsible for notifying OC San of any pending or actual insurance policy cancellation, as described in Article I. Cancellation and Policy Change Notice below. |

I. Cancellation and Policy Change Notice:

The CONSULTANT is required to notify OC San in writing of any insurance cancellation notice it receives or other knowledge of pending or actual insurance policy cancellation, within two (2) working days of receipt of such notice or acquisition of such knowledge. Additionally, the CONSULTANT is required to notify OC San in writing of any change in the terms of insurance, including reduction in coverage or increase in deductible/SIR, within two (2) working days of receipt of such notice or knowledge of same.

Said notices shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Contracts, Purchasing & Materials Management Division

J. Primary Insurance:

All liability policies shall contain a Primary and Non-Contributory Clause. Any other insurance maintained by OC San shall be excess and not contributing with the insurance provided by the CONSULTANT.

K. Separation of Insured:

All liability policies shall contain a "Separation of Insureds" clause.

L. Non-Limiting (if applicable):

Nothing in this document shall be construed as limiting in any way, nor shall it limit the indemnification provision contained in this Agreement or the extent to which the CONSULTANT may be held responsible for payment of damages to persons or property.

M. Deductibles and Self-Insured Retentions:

Any deductible and/or self-insured retention must be declared to OC San on the Certificate of Insurance. All deductibles and/or self-insured retentions require acceptance by OC San. At the option of OC San, either: a) the insurer shall reduce or eliminate such deductible or self-insured retention as respects OC San or b) the CONSULTANT shall provide a financial guarantee satisfactory to OC San guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

N. Defense Costs:

Liability policies shall have a provision that defense costs for all insureds and additional insureds are paid in addition to and do not deplete any policy limits.

O. Subconsultants/Subcontractors:

The CONSULTANT shall be responsible to establish insurance requirements for Subconsultants/Subcontractors hired by the CONSULTANT. The insurance shall be in amounts and types reasonably sufficient to deal with the risk of loss involving the Subconsultants'/Subcontractors' operations and work.

SECTION 9. PROJECT TEAM AND SUBCONSULTANTS

CONSULTANT shall provide to OC San, prior to execution of a Task Order, the names and full descriptions of all Subconsultants/Subcontractors and CONSULTANT's project team members anticipated to be used in performing work under a Task Order. In its proposal, CONSULTANT shall include a description of the work and services to be performed by each

Subconsultant/Subcontractor and each of CONSULTANT's project team members. CONSULTANT shall include the respective compensation amounts for CONSULTANT and each Subconsultant/Subcontractor broken down as indicated in Section 4 – COMPENSATION, above.

There shall be no substitution of the listed Subconsultants/Subcontractors and CONSULTANT's project team members without prior written approval by OC San.

SECTION 10. ENGINEERING REGISTRATION

The CONSULTANT's personnel and its Subconsultants/Subcontractors shall be comprised of registered engineers and a staff of specialists and draftsmen in each department. The firm itself is not a registered engineer but represents and agrees that when the performance of this Agreement requires the services of a registered engineer, such services hereunder will be performed under the direct supervision of registered engineers who are registered in the State of California.

SECTION 11. AUDIT PROVISIONS

- A. OC San retains the reasonable right to access, review, examine, and audit any and all books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify that the CONSULTANT is in compliance with all the requirements under this Agreement. The CONSULTANT shall include OC San's right as described above in any and all of their subcontracts and shall ensure that these rights are binding upon all its Subconsultants/Subcontractors.
- B. OC San retains the right to examine CONSULTANT's books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify all direct and indirect costs, of whatever nature, which are claimed to have been incurred, or anticipated to be incurred, or to ensure CONSULTANT's compliance with all the requirements under this Agreement during the term of this Agreement and for a period of three (3) years after expiration or earlier termination of the Agreement.
- C. The CONSULTANT shall maintain complete and accurate records in accordance with generally accepted industry standard practices and OC San's policy. The CONSULTANT shall make available to OC San for review and audit all project-related accounting records and documents and any other financial data within fifteen (15) days after receipt of notice from OC San. Upon OC San's request, the CONSULTANT shall submit exact duplicates of originals of all requested records to OC San. If an audit is performed, the CONSULTANT shall ensure that a qualified employee of the CONSULTANT will be available to assist OC San's auditor in obtaining all project related accounting records and documents and any other financial data.

SECTION 12. LEGAL RELATIONSHIP BETWEEN PARTIES

The legal relationship between the Parties is that of an independent contractor and nothing herein shall be deemed to transform the CONSULTANT, its staff, independent contractors, or its Subconsultants/Subcontractors, into agents or employees of OC San and shall obtain no rights to any benefits which accrue to OC San's employees. CONSULTANT's staff performing services under the Agreement shall at all times be employees and/or independent

contractors of the CONSULTANT. The CONSULTANT shall monitor and control its staff and wages, salaries, and other amounts due directly to its staff in connection with the Agreement. The CONSULTANT shall be responsible for hiring, review, and termination of its staff and shall be accountable for all reports and obligations respecting them, such as social security, income tax withholding, unemployment compensation, workers' compensation insurance, and similar matters.

SECTION 13. NOTICES

All notices hereunder and communications regarding the interpretation of the terms of this Agreement, or changes thereto, shall be effected by delivery of said notices in person, by email or by depositing said notices in the U.S. mail, registered or certified mail, return receipt requested, postage prepaid.

Notice shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Ludwig Lapus, Principal Contracts Administrator
E-mail: llapus@ocsan.gov
Copy: Daniel Berokoff, Engineering Supervisor
E-mail: dberokoff@ocsan.gov

Notice shall be mailed to CONSULTANT at:

AtkinsRéalis USA, Inc.
801 South Grand Avenue, Suite 275
Los Angeles, CA, 90017
Attention: Maria Alvarez
E-mail: Maria.Alvarez@atkinsrealis.com
Copy: Ken Hawkins
E-mail: Ken.Hawkins@atkinsrealis.com

All communication regarding the Task Order will be addressed to the Project Manager. Direction from other OC San staff must be approved in writing by OC San's Project Manager prior to action from the CONSULTANT.

SECTION 14. TERMINATION

OC San may terminate this Agreement at any time, without cause, upon giving thirty (30) days written notice to the CONSULTANT. In the event of such termination, the CONSULTANT shall be entitled to compensation for work performed on a prorated basis through and including the effective date of termination.

The CONSULTANT shall be permitted to terminate this Agreement upon thirty (30) days written notice only if the CONSULTANT is not compensated for billed amounts in accordance with the provisions of this Agreement when the same are due. Notice of termination shall be mailed to OC San at the address listed in Section 13 – NOTICES, above.

SECTION 15. COMPLIANCE

The CONSULTANT certifies by the execution of this Agreement that it pays employees not less than the minimum wage as defined by law and that it does not discriminate in its employment with regard to race, color, religion, sex, or national origin; that it is in compliance with all Federal, State, and local directives and executive orders regarding non-discrimination in employment; and that it agrees to demonstrate positively and aggressively the principle of equal opportunity in employment.

The CONSULTANT shall comply with all applicable laws, ordinances, codes, and regulations of Federal, State, and local government in all aspects related to this Agreement and any work completed for OC San.

SECTION 16. AGREEMENT EXECUTION AUTHORIZATION

Both OC San and the CONSULTANT do covenant that each individual executing this document by and on behalf of each Party is a person duly authorized to execute this Agreement for that Party.

SECTION 17. DISPUTE RESOLUTION

In the event of a dispute arising between the Parties regarding performance or interpretation of this Agreement, the dispute shall be resolved by nonbinding mediation under the auspices of the Judicial Arbitration and Mediation Service ("JAMS"), or similar organization or entity conducting alternate dispute resolution services.

SECTION 18. ATTORNEY'S FEES, COSTS, AND NECESSARY DISBURSEMENTS

If any action at law or inequity or if any proceeding in the form of an Alternative Dispute Resolution is necessary to enforce or interpret the terms of this Agreement, the prevailing Party shall be entitled to reasonable attorney's fees, costs and necessary disbursements in addition to any other relief to which it may be entitled.

SECTION 19. DUTY TO CORRECT OR REVISE

CONSULTANT shall perform its services in accordance with generally accepted industry and professional standards. If, within the 12-month period following completion of its services, OC San informs the CONSULTANT that any part of the services fails to meet those standards, the CONSULTANT shall, within the time prescribed by OC San, take all such actions as are necessary to correct or complete the noted deficiency(ies).

SECTION 20. INDEMNIFICATION

To the fullest extent permitted by law, the CONSULTANT shall indemnify, defend (at the CONSULTANT's sole cost and expense and with legal counsel approved by OC San, which approval shall not be unreasonably withheld), protect and hold harmless OC San and all of OC San's officers, directors, employees, consultants, and agents (collectively the "Indemnified Parties"), from and against any and all claims, damages, liabilities, causes of action, suits, arbitration awards, losses, judgments, fines, penalties, costs, and expenses (including, without limitation, reasonable attorneys' fees, disbursements and court costs, and all other professional, expert, or CONSULTANT's fees and costs, and OC San's

general and administrative expenses) individually, a "Claim" and collectively, "Claims", which may arise from or are in any manner related, directly or indirectly, to any work performed or any operations, activities, or services provided by the CONSULTANT in carrying out its obligations under this Agreement to the extent of the negligent, recklessness, and/or willful misconduct of the CONSULTANT, its principals, officers, agents, employees, CONSULTANT's suppliers, Subconsultants, Subcontractors, and/or anyone employed directly or indirectly by any of them, regardless of any contributing negligence or strict liability of an Indemnified Party. Notwithstanding the foregoing, nothing herein shall be construed to require the CONSULTANT to indemnify the Indemnified Parties from any Claim arising solely from:

(A) the negligence or misconduct of the Indemnified Parties; or

(B) a natural disaster or other act of God, such as an earthquake; or

(C) the independent action of a third party who is neither one of the Indemnified Parties nor the CONSULTANT, nor its principal, officer, agent, employee, nor the CONSULTANT's supplier, Subconsultant, Subcontractor, nor anyone employed directly or indirectly by any of them.

Exceptions (A) through (B) above shall not apply, and the CONSULTANT shall, to the fullest extent permitted by law, indemnify the Indemnified Parties from Claims arising from more than one cause if any such cause taken alone would otherwise result in the obligation to indemnify hereunder.

The CONSULTANT's liability for indemnification hereunder is in addition to any liability the CONSULTANT may have to OC San for a breach by the CONSULTANT of any of the provisions of this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit the CONSULTANT's indemnification obligation or other liability hereunder. The terms of this Agreement are contractual and the result of negotiation between the Parties. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code section 1654) that ambiguities are to be construed against the drafting Party shall not be employed in the interpretation of this Agreement.

SECTION 21. DUTY TO DEFEND

The duty to defend hereunder is wholly independent of and separate from the duty to indemnify and such duty to defend shall exist regardless of any ultimate liability of the CONSULTANT and shall be consistent with Civil Code section 2782.8. Such defense obligation shall arise immediately upon presentation of a Claim by any person if, without regard to the merit of the Claim, such Claim could potentially result in an obligation to indemnify one or more Indemnified Parties and upon written notice of such Claim being provided to the CONSULTANT. Payment to the CONSULTANT by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition precedent to enforcing such Indemnified Party's rights to indemnification hereunder. In the event a final judgment, arbitration, award, order, settlement, or other final resolution expressly determines that the Claim did not arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONSULTANT, to any extent, then OC San will reimburse the CONSULTANT for the reasonable costs of defending the Indemnified Parties against such Claims.

The CONSULTANT's indemnification obligation hereunder shall survive the expiration or earlier termination of this Agreement until such time as action against the Indemnified Parties for such matter indemnified hereunder is fully and finally barred by the applicable statute of limitations.

SECTION 22. COMPLIANCE WITH OC SAN POLICIES AND PROCEDURES

The CONSULTANT shall be required to comply with all OC San policies and procedures. OC San requires the CONSULTANT and its Subconsultants/Subcontractors to follow and ensure their employees follow all Federal, State, and local regulations as well as OC San's safety standards while working at OC San locations. If during the course of the contract it is discovered that OC San's safety standards do not comply with Federal, State, or local regulations, then the CONSULTANT is required to follow the most stringent regulatory requirement at no additional cost to OC San. The CONSULTANT and all of its employees and Subconsultants/Subcontractors shall adhere to all applicable Contractor Safety Standards attached hereto as Attachment "L".

SECTION 23. GOVERNING LAW

This Agreement shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in Orange County in the event any action is brought in connection with this Agreement or the performance thereof.

SECTION 24. TIME OF ESSENCE

Time is of the essence in the performance of this Agreement.

SECTION 25. CONFLICT OF INTEREST

The CONSULTANT covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of the services contemplated by this Agreement. No person having such interest shall be employed by or associated with the CONSULTANT.

SECTION 26. ENTIRE AGREEMENT

This Agreement constitutes the entire understanding and agreement between the Parties and supersedes all previous negotiations between them pertaining to the subject matter hereof.

[THIS SECTION INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, this Agreement has been executed in the name of OC San and the CONSULTANT by their respective duly authorized officers, as of the date first written above.

ATKINSRÉALIS USA, INC.

By _____ Date _____

Printed Name & Title

ORANGE COUNTY SANITATION DISTRICT

By _____ Date _____
Chad P. Wanke
Board Chairman

By _____ Date _____
Kelly A. Lore
Clerk of the Board

By _____ Date _____
Ruth Zintzun
Finance & Procurement Manager

Attachments: Attachment "A" Sample Scope of Work
Attachment "B" Not Used
Attachment "C" Not Used
Attachment "D" Allowable Direct Costs
Attachment "E" Rates Proposal
Attachment "F" Not Used
Attachment "G" Not Used
Attachment "H" Not Used
Attachment "I" Not Used
Attachment "J" Not Used
Attachment "K" Not Used
Attachment "L" Contractor Safety Standards
Attachment "M" Iran Contracting Act Verification

ATTACHMENT “A”

SAMPLE SCOPE OF WORK

ATTACHMENT "A"

SAMPLE SCOPE OF WORK DESCRIPTION

OC SAN staff will develop detailed scope of work to be included in each Request for Task Order Proposal (RFTOP). The RFTOP will require Consultants to base their proposals on the scope of work included in the RFTOP. The remainder of this document are the templates typically used for design projects. Notes to scope editor are shown, although they will be removed before a scope of work is included in a RFTOP. Yellow highlighted text indicates where project specific information or a hypothetical example is given.

Design Task Order

Attachment A - Scope of Work

1 PROJECT REQUIREMENTS

Provide professional design engineering services for the project described herein.

1.1 BACKGROUND

- A. The Secondary Clarifiers at Plant No. 1 were constructed under Project Nos. P1-16 (1973), P1-36-2 (1995), and P1-82 (2005). A buried ductile iron plant water line around the secondary clarifiers feeds the scum sprayers and hose bibs. Because the plant water chemical composition is so corrosive to ductile iron, many failures have occurred.

1.2 GENERAL PROJECT DESCRIPTION

- A. This project includes the replacement of approximately 1800 feet of existing 6-inch ductile iron buried plant water piping, valves, fittings, and connections.
- B. A location map is provided in **Figure 1**.

[insert location map]

Figure 1 - Project Location Map

1.3 PROJECT ELEMENTS

- A. **Element 1: Piping** – Replace the existing 1,800 feet of 6-inch buried ductile iron plant water piping with new 6-inch plant water piping.
- B. Assumptions for level of effort:
 - 1. 1,600 feet of piping shall be below grade and 200 feet shall be either above or below grade.
 - a. 1,600 feet of piping is located around the Secondary Clarifiers. Assume high-density polyethylene (HDPE) as the pipe material with appropriate dimension ratio value.
 - b. 200 feet of piping will re-route the existing plant water line on the northwest end of the Secondary Clarifiers. Recent projects disconnected the existing plant water line at various locations resulting in an incomplete loop. This piping will reconnect the lines to allow for a complete loop. See Exhibit 13.1 for photos and Exhibit 13.3 for proposed routing design.
 - (1) For above grade pipe material, assume cement-lined ductile iron or fiberglass-reinforced plastic.
 - 2. Follow existing alignment with new pipe. New alignments shall be kept as close to the existing alignment as feasible.
 - a. The Secondary Effluent Junction Box No. 4 (SEJB-4), located at the southwest corner of the Secondary Clarifiers, is congested with various utilities, such as plant water, secondary effluent, and reclaimed water lines, and associated valves. Follow the existing alignment in this important area.
 - b. Concrete encasement of HDPE, located on the west side of the Secondary Clarifiers on Fuentes Road, was installed under project P1-102 (2006). Assume potholing is necessary to survey the edge of the concrete and confirm the limits of the existing concrete encasement

do not interfere with this project. As much as possible, the new alignment shall avoid the concrete encasement.

1.4 PROJECT SCHEDULE

- A. **Table 1** lists major project deliverables along with Orange County Sanitation District's (OC SAN) review and approval periods. CONSULTANT shall comply with the deadlines indicated in that table. OC SAN will consider an alternative CONSULTANT proposed schedule provided it is consistent with OC SAN resources, schedule constraints, and adds value. The negotiated durations will set the design baseline schedule.

Table 1 – Project Milestones and Deadlines

MILESTONE	DEADLINE
Kickoff Meeting	The kickoff meeting will be scheduled to coincide with the Project Notice to Proceed (NTP).
Preliminary Design Memo (PDM)	[XX] workdays from Preliminary Design Phase NTP.
OC SAN Review of PDM	10 workdays from receipt of PDM.
Submit Design Submittal 3 (DS3)	[YY] workdays from approval of PDM.
OC SAN Review of DS3	15 workdays from receipt of DS3.
Submit Final Design Submittal (FDS)	15 workdays from receipt of OC SAN comments on DS3.
OC SAN Review of FDS	10 workdays from receipt of FDS.
Submit Final Technical Plans and Specifications (FTPS)	15 workdays from receipt of OC SAN comments on FDS.
Total	[ZZZ] workdays

1.5 PROJECT MANAGEMENT

- A. CONSULTANT shall be responsible for managing CONSULTANT's project execution, schedule, budget, subconsultants, and coordination with other projects.
- B. Per **Exhibit 18**, PMWeb will be used for the management of this agreement.
- C. [Monthly Progress Report: Submit monthly progress reports at the same time as monthly invoices that include the following contents:
1. Work activities completed to date, in the current reporting period, and projected for the coming month.
 2. A brief description of outstanding issues and potential cost, schedule, quality impacts.
 3. Potential changes in the project scope or design scope.
 4. Any corrective actions needed to avoid potential impacts.
 5. Budget status: actual costs to date, costs to complete, and costs at completion.
 6. Schedule status: variances between scheduled and forecasted milestone dates.]
- D. Monthly Invoices: Provide a monthly cost report and/or invoices, which shall document the man-hours and billing rate for each person that works on the project, and shall include the following:
1. Budget
 2. Current billing period invoicing
 3. Previous billing period "total invoiced to date"
 4. Budget Amount Remaining
 5. Current billing period "total percent invoiced to date"

1.6 QUALITY CONTROL

- A. Provide Quality Assurance and Quality Control of the work.
- B. Provide documentation upon request that the CONSULTANT has performed a quality control review in-house, and all the comments have been addressed prior to providing any submittals to OC SAN.

1.7 PROJECT MEETINGS

- A. CONSULTANT shall communicate throughout the project to keep OC SAN apprised of the job, review work-in-progress, share information, discuss project submittals, present findings of technical analyses, receive and resolve comments, and obtain decisions and direction by OC SAN staff.
 - 1. **Table 2** below lists the anticipated meetings and site visits. Microsoft Teams shall be used for meetings. CONSULTANT will provide an agenda 2 workdays prior to each meeting. Meeting minutes will be submitted to the OC SAN project manager for review within 3 workdays of the meeting.

Table 2 – Project Assumed Meetings and Site Visits

DESIGN ACTIVITY	MEETINGS	SITE VISITS
Kickoff Meeting	1 (1-hour)	
PDM	Progress meeting (1-hour, every 2 weeks)	8 hours
PDM Workshop	2 (1-hour)	
DS3	Progress meeting (1-hour, every 2 weeks)	8 hours
DS3 Workshop	2 (1-hour)	
FDS	Progress meeting (1-hour, weekly)	
FDS Workshop	1 (1-hour)	
FTPS	Progress meeting (1-hour, weekly)	
Construction Services	6 hours	24 hours
Closeout	4 hours	12 hours

1.8 SUBMITTAL REVIEWS

- A. Deliverables (other than specifications) shall be submitted in searchable PDF format with no hard copy. Deliverables shall be bookmarked and hyperlinked for navigation per **Exhibit 14**.
- B. OC SAN has standardized on the use of Bluebeam Revu for reviewing and providing comments to PDF files. The purpose of the studio session is to provide review and collaboration. OC SAN staff will create the Bluebeam studio session, invite attendees, configure, and manage the studio session. Make drawing submittals in Bluebeam and respond to OC SAN comments in Bluebeam per **Exhibit 15**.

1.9 SPECIFICATIONS

- A. Prior to preparing or editing specifications, CONSULTANT shall meet with OC SAN staff to determine which OC SAN and CONSULTANT provided specifications should be included in the design. After discussions, all specifications should be loaded in Microsoft Teams (Teams) early in design and prior to editing for DS3.
- B. Tailor all specifications to project and remove requirements that do not apply.
- C. Unless a CONSULTANT is using their own specification management software, Specifications should remain in Teams for editing throughout design. Make all edits to specifications hosted in Teams. Unless agreed to, Specifications should not be removed from Teams or edited elsewhere.
- D. Provide specifications as Microsoft Word (Word) files with Track Changes enabled throughout design.

- E. OC SAN staff will review specifications during submittal review periods. CONSULTANT shall respond to OC SAN comments using Word “Reply” and “Resolve.” CONSULTANT shall “Reply” to each OC SAN comment describing how the comment will be addressed and revise the specification, as needed, to address the comment. “Resolve” will be used by the reviewer or designee to confirm their comment has been addressed. For more information see **Exhibit 16**.
- F. Prior to advertisement, all Word comments and revisions shall be Track Changes accepted, rejected, resolved, or deleted by OC SAN staff prior to bid.

2 PRELIMINARY DESIGN

All significant material and equipment decisions are to be made before the start of Design. At the end Preliminary Design, major design elements shall be fixed, and major equipment, footprints, and utility connection locations shall be well established. The extent of the design and the number and type of drawings shall also be established.

2.1 PRELIMINARY DESIGN AND PDM

- A. The PDM shall consist of a PowerPoint presentation. Present PDM findings and recommendations to OC SAN in a stakeholder meeting using the PowerPoint presentation mentioned in this section for consensus before the start of Design.
- B. Identify any equipment that has one competitive supplier (i.e., sole source). In those cases, recommend an appropriate procurement strategy compatible with California Law and OC SAN policies.
- C. Develop 2 conceptual design alternatives for the plant water piping alignment.
 - 1. Alternatives:
 - a. Reuse exiting alignment and existing points of connection
 - b. Alternate alignment along tunnels in and around secondary clarifiers
 - 2. Perform the following with each alternative:
 - a. Cost, benefit, and life cycle analysis.
 - b. Identify plant water construction shutdown requirements with estimated durations.
 - c. Identify construction access requirements and limitations.
 - d. Prepare preliminary drawings (sketches).
 - 3. Discuss the available alternatives with OC SAN. The PDM shall include the recommendation alternative.
- D. Prepare drawings showing:
 - 1. Proposed alignment of piping
 - 2. Proposed piping materials and quantities
 - 3. Proposed quantity and type of valves and valve cans
 - 4. Proposed connection points which include the following:
 - a. New replacement pipes connecting to existing main plant water line
 - b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
 - 5. Demolition of existing ductile iron pipes and valves
 - 6. Proposed design of new valves and valve cans
 - 7. Proposed design of connection points
 - a. New replacement pipes connecting to existing main plant water lines

- b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
- 8. Proposed design of pipe supports by typical detail and max spacing table
- E. Summarize key constructability and construction sequencing constraints.
 - 1. Develop process flow schematic of the components of the plant water system at Plant No. 1 that impact the pipelines being replaced.
- F. Prepare preliminary construction schedule.
- G. Prepare P&IDs: Fully detailed for each design "module", e.g., 1 pump set typical of all with proposed tagging strategy.
- H. Perform any potholing activities required for the concrete encasement survey specified under Element 1.
- I. Quantify soil contamination by determining the volume of excavation work needed to perform the Work. Coordinate with OC SAN ENGINEER to determine the area of excavation. Soil testing is not necessary.
- J. Develop testing requirements. Assume:
 - 1. Pressure leak and valve testing shall be included.
 - 2. Plant water operating pressure is 110 PSI.

2.2 PRELIMINARY DESIGN CONSTRUCTION COST ESTIMATE

- A. Prepare an AACE International Class 3 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01. Data used to prepare the cost estimate shall be included as an attachment to the PDM.
 - 1. Determine project specific and appropriate values to use for the percentages for profit, bond, and insurance.
 - 2. Costs for project level allowance, insurance, profit, and bond shall be cumulative and listed as individual line items.
 - 3. Allowances or mark ups should be well explained and itemized.
 - a. Include "Market Volatility" allowance of xx%.(revise based on the market conditions)
 - b. Do not setup allowance for change orders.
 - c. Do not escalate to midpoint of construction - this is by OC SAN.
 - 4. Specialty work should be recently (under 6 months) estimated by vendor.
 - a. For example, sewer bypassing services should be estimated by vendor (i.e., Rain 4 Rent).
 - b. Provide vendor quotes for high-cost equipment.
 - c. Minor equipment costs may be documented by written telephone quotations.
 - 5. Provide breakdown of lump sum costs.
 - 6. Show labor rates so they can be checked.
 - 7. Provide all back back up for all documentation obtained for the cost estimate purposes. The cost estimate back up shall have the date and the vendor name/contact name. If catalog price is used, provide the year of that publication.
- B. Prepare estimate of construction duration. The suggested construction duration shall take in considerations the verifiable lead time for all equipment.

3 DESIGN

Prepare biddable plans, technical specifications, other Bid Documents, and any associated design calculations, required to complete the Project Elements.

3.1 DS3 DELIVERABLES

- A. Meet at a 50% completion level with OC SAN staff to review design progress. Formal deliverables are not necessary. QA/QC is also not required for this preview.
- B. At this submittal, the design is essentially finished and submitted as complete. DS3 shall include all finished and checked plans and specifications. OC SAN staff will review DS3 and provide comments to the drawings and specifications. The CONSULTANT should be finished with no remaining design work except for OC SAN comments provided at DS3 review and their incorporation at FDS.
- C. [Prepare construction drawings in CAD conforming to OC SAN's CAD Manual. A CAD compliance check will be performed at DS3 (Exhibit 17, Chapter 8 explains the CAD compliance check, and Appendix D contains the "CAD Standards Compliance Checklist" summarizing all items checked by OC SAN). OC SAN will provide base layers and utilities for Work locations within the treatment plant boundaries.]

3.2 DS3 COST ESTIMATE

- A. Prepare an AACE International Class 2 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01 based on the DS3 design. Data used to prepare the cost estimate shall be included as an attachment to DS3.
- B. Prepare estimate of construction duration.

3.3 FDS DELIVERABLES

- A. Final Design Submittal (FDS) is for OC SAN to confirm all comments from DS3 have been addressed and incorporated and add any additional comments.

3.4 FTPS DOCUMENTS

- A. Final Technical Plans and Specifications is for the CONSULTANT to address and incorporate all comments and provide all necessary stamps and signatures for a complete bid package suitable for advertisement by OC SAN.

3.5 CONSTRUCTION COST ESTIMATE "ENGINEER'S ESTIMATE"

- A. 30 calendar days prior to advertisement, refresh the DS3 Class 2 cost estimate. Get updated vendor quotes used to prepare the DS3 cost estimate. This will become the Engineer's Estimate published in the front-end documents.

3.6 PERMITTING ASSISTANCE ([ALLOCATE 60 HOURS] [NOT INCLUDED IN THIS AGREEMENT])

- A. [For all applicable Project Elements of this Scope of Work, provide Bid Documents that ensure that the design complies with all conditions of existing permits and permits required to construct and implement this project. Testing, construction drawings, specifications, and supplemental drawings shall be prepared, as necessary, in the format required to obtain all permits.]
- B. Assist OC SAN in obtaining permits. This assistance shall include identifying applicable permits, completing required design, plan preparation, application forms provided by OC SAN, preparing supporting documentation for the permit applications as required by the issuing agency, furnishing the required number of copies of all construction drawings and exhibits, and attend meetings with permitting agencies at the request of OC SAN.
- C. Except for construction contractor-furnished permits, OC SAN staff will execute all applications. CONSULTANT shall determine the cost and requirements of all permits. All permit fees will be paid directly by OC SAN and will not be part of CONSULTANT's fee.
- D. Submit all supporting documentation in a timely fashion for all permits required for this project as described below.
 - 1. Caltrans Encroachment Permits

- a. Determine if encroachment permits or other types of permits are required by Caltrans for the design and construction phases. Provide the work necessary to obtain such permits including coordinating and attending meetings.

2. City/County Encroachment Permits

- a. Provide coordination, work effort, and attend meetings, as required, to obtain encroachment permits from each city and agency who has jurisdiction. Process the plans through the cities and agencies for approval, revise plans, and meet with them, as required, to obtain approval.]

3.7 BID SUPPORT SERVICES

- A. Provide answers to bidder's questions related to the design. Provide revisions to specifications and drawings when needed for addendum.
- B. Within 2 weeks of the bid opening date, prepare conformed document set (drawings, databases, specification, and other required materials) that incorporates the addenda. See requirements of OC SAN's CAD Manual.

3.8 POPULATE PMWEB LIST OF SUBMITTALS (ALLOCATE 24 HOURS)

- A. PMWeb is used to manage communication with the contractor. OC SAN uses an Excel template to populate the list of all submittals. The CONSULTANT shall review each project specification and complete the Submittal Items Template as follows:
 1. Enter the list of project specifications.
 2. Enter the list of commissioning packages. Commissioning packages are defined by Section 01810, Commissioning.
 3. Enter the following information for each submittal item.
 - a. Specification section: enter the specification section requiring the submittal.
 - b. Submittal Item description: enter the description of the submittal. Submittal items that refer to multiple specifications shall include referenced specification sections in brackets.
 - c. Comments: enter notes, comments, or clarifications. This field is optional.
 - d. Commissioning package: enter the commissioning package of the submittal item. Submittal items shall be duplicated when the same submittal is required for multiple commissioning packages. Items shall be separated into mobilization, general construction, or a commissioning package defined by the project specifications.
 - e. Phase: Identify which phase each submittal is required to be approved.
 - f. Retention: Specify if the submittal is a Project File or Facility Record based on OC SAN's Records Retention Policy.
 - g. Lead time: Specify the appropriate number of workdays that OC SAN has to review the particular submittal.
 - h. Load: Specify if the submittal should be loaded into PMWeb prior to NTP, upon contractor approval, or prior to the start of commissioning.
- B. OC SAN will provide a PMWeb Master Submittal Items template that includes the submittals required by OC SAN's Master Specifications. The CONSULTANT shall not deviate from the Master PMWeb Submittal Items, except as required by the project specific specifications. The CONSULTANT shall develop submittal items for specifications that are not part of OC SAN's Master Specifications.
- C. OC SAN will provide a 1-hour virtual training on the use of the PMWeb Master Submittal Items Template.
- D. The CONSULTANT shall populate, receive comments, address comments, and provide completed submittal form as follows:
 1. 20 workdays after advertisement date.

3.9 SAFETY AND RISK MEETING

- A. Ensure that an OC San Risk Management safety and security professional has been assigned to the project.
- B. CONSULTANT shall prepare and meet with OC San Risk Management personnel at all design stages to review Exhibit 11 Sample Full Project Safety Review Plan and Exhibit 12 Sample Risk Management Check List. This shall be completed in accordance with Exhibit 4 Risk Management Requirements.
- C. CONSULTANT shall update Exhibits 11 and 12 throughout the design phases. CONSULTANT shall provide OC San Risk Management with the final copies of Exhibit 11 and Exhibit 12 at completion of the Design Project.

4 CONSTRUCTION SERVICES

OC SAN will administer and provide field inspection for construction contracts. Construction and installation support services shall be provided by the CONSULTANT on an as-needed basis and as requested by OC SAN. The services are indicated below.

4.1 SUBMITTAL REVIEWS (ALLOCATE 15 HOURS)

- A. OC SAN will manage submittal review. The CONSULTANT shall use PMWeb to review and return comments to OC SAN. Return comments within 5 workdays.

4.2 REQUESTS FOR INFORMATION (RFIS) (ALLOCATE 15 HOURS)

- A. OC SAN will manage the processing of RFI's. When requested by OC SAN, CONSULTANT shall return written responses to OC SAN within 5 workdays of receipt of RFI using PMWeb. Generate necessary sketches, figures, and modifications to the drawings for clarifications.

4.3 PROGRESS MEETINGS AND SITE VISITS

- A. Refer to **Table 2**.

4.4 RECORD DRAWINGS

- A. Verify that the Contractor's As-Built set correctly reflects the information included in the approved shop drawings, RFIs, approved Field Change Orders, plan clarifications, plan changes, and other deviations from the conformed drawings, and that the information in the set is complete.
- B. Draft Record Drawings shall be submitted to OC SAN within 4 weeks of receipt from OC SAN of the approved Contractor's As-Built drawings. The Final Record Drawings shall be submitted within one week of receipt of OC SAN comments on the Draft Record Drawings.
- C. Prepare Draft Record Drawings based on the Final Field Markup Set for all drawings in accordance with the requirements in the CAD Manual. Submit the Draft Record Drawings to the OC SAN Resident Engineer. The Draft Record Drawings will be reviewed for content and CAD compliance by OC SAN staff. If no comments are identified, CONSULTANT shall prepare the Final Record Drawings and submit them along with the Contractor's field markup set to the Project Manager. For content and placement of record drawing stamp, see CAD Manual.
- D. Submit an electronic copy of the record drawings to OC SAN for review and approval. The acceptance of the record drawings shall be deemed a condition for completion of work.
- E. Contractor-generated drawings described in the Design Guidelines and the shop drawings will not be updated by CONSULTANT. The format and quantities for delivery of the submittals shall be listed below:

Contents	Draft Record Drawings	Final Record Drawings
All related electronic files, including CAD and compiled PDFs.	One copy to be uploaded to Microsoft Teams.	One copy to be uploaded to Microsoft Teams.

4.5 EQUIPMENT INFORMATION DATABASE (EID) (ALLOCATE [X] HOURS [NOT INCLUDED IN THIS AGREEMENT])

- A. OC SAN uses Maximo software to manage and track asset information. When new assets are added or existing assets are modified by a project, an EID Excel spreadsheet is used to populate or update Maximo asset information. CONSULTANT shall meet with OC SAN EIM staff to request an EID spreadsheet pre-populated with the new or modified assets. OC SAN staff will provide training on how to populate the EID spreadsheet. Field work will be needed to apply equipment tags and record equipment nameplate information and serial numbers to populate the EID. Coordinate with Maintenance Specialists (David Haug or designee, Div. 870) to walk new facilities to verify accuracy of P&IDs and EID.

4.6 [UPDATE BASELINE DRAWINGS]

5 STAFF ASSISTANCE

OC SAN staff member or designee assigned to work with CONSULTANT on the design of this project is Jessica Cheung. Phone (714) 593-7147, e-mail jcheung@ocsan.gov.

6 EXHIBITS

- A. Exhibits 1-3, 5-10 – Not Used
- B. Exhibit 4 – Risk Management Requirements
- C. Exhibit 11 – Sample Full Project Safety Review Plan
- D. Exhibit 12 – Sample Risk Management Checklist
- E. Exhibit 13 – Project Reference Material
 - a. 13.1 – Photos
 - b. 13.2 – Plant 1 Plant Water System Map
 - c. 13.3 – Proposed Design Idea (The CONSULTANT may start with this conceptual design.)
 - d. 13.4 – Proposed Valve Cans (The CONSULTANT may start with this conceptual design.)
 - e. 13.5 – Record Drawings (Available Upon Request)
 - (1) P1-82, Activated Sludge Plant Rehabilitation (2005)
 - (2) P1-36-2, Secondary Treatment Improvements at Plant No. 1 (1995)
 - (3) P1-16, 46 MGD Activated Sludge Plant at Reclamation Plant No. 1 (1973)
 - (4) P1-102, Secondary Activated Sludge Facility 2 at Plant No.1 (2006)
- F. Exhibit 14 – BlueBeam Designer Training for Submission
- G. Exhibit 15 – BlueBeam Designer User Training
- H. Exhibit 16 – Spec Review using Microsoft Word and Teams
- I. Exhibit 17 – [CAD Standard Manual](#)
- J. Exhibit 18 – PMWeb

JC:tk

PROFESSIONAL DESIGN SERVICES AGREEMENT

This PROFESSIONAL DESIGN SERVICES AGREEMENT (Agreement), to be effective this 1st day of July, 2024, is made and entered into by and between:

ORANGE COUNTY SANITATION DISTRICT
hereinafter referred to as "OC San"

AND

BLACK AND VEATCH CORPORATION
hereinafter referred to as "CONSULTANT"

individually referred to as the "Party" and collectively as the "Parties".

RECITALS

WHEREAS, in accordance with Ordinance No. OC SAN-61 and pursuant to a Request for Qualifications ("Underlying RFQ"), the Board of Directors of OC San, by action on May 22, 2024, approved the award of the Agreement for **CONTRACT NO. FE24-00-02**, to CONSULTANT to provide services for selected projects on a task order (Task Order) basis from July 1, 2024 to June 30, 2027; and

WHEREAS, consistent with the Underlying RFQ, the CONSULTANT has been prequalified to perform services for the following project types: Project Type 2: Linear and Collections and Project Type 3: Process, Electrical and Instrumentation & Control (I&C); and

WHEREAS, for Task Orders estimated to cost \$100,000 or less, the Director of Engineering, with concurrence of the Purchasing Manager, may solicit a proposal from one (1) firm on the prequalified list, which will include the project types for which the consultants are prequalified; and

WHEREAS, the CONSULTANT is qualified to provide and has agreed to provide the necessary professional engineering and related services under this Agreement; and

WHEREAS, by this Agreement, the Parties intend to set forth the general terms and conditions that will apply to any specific project for which CONSULTANT is given a Task Order by OC San.

NOW, THEREFORE, OC San and the CONSULTANT mutually agree as follows:

SECTION 1. SCOPE OF AGREEMENT

OC San, at its sole discretion, may, from time to time during the term of this Agreement, issue a Request for Task Order Proposal ("RFTOP") setting forth the detailed requirements and scope of work to be performed on the identified project and thereafter, upon receipt of a proposal from the CONSULTANT, may issue a Task Order to proceed with the work. The scope of work will be in a form attached hereto as Attachment "A" – Sample Scope of Work.

Upon execution by OC San, the Task Order shall become an operative part of this Agreement. Should any conflict or inconsistency exist in the contract documents identified in this section, the conflict or inconsistency shall be resolved by applying the provisions in the highest priority document, which shall be determined in the following order of priority:

1. Agreement and any amendments thereto
2. the Task Order
3. the RFTOP

SECTION 2. TASK ORDER ISSUANCE BY OC SAN

The Task Order issued by OC San shall, specifically or by reference to the RFTOP and corresponding proposal, set forth the terms that will apply to the specific project for which the services will be rendered. Those terms shall include, but not be limited to, scope of work, time for performance, and compensation.

SECTION 3. TERM

This Agreement shall commence on the effective date of this Agreement and terminate on June 30, 2027, unless further extended by written agreement signed by the Parties. Any work that is required by a Task Order and is not finished by the date of termination shall be continued and completed by the CONSULTANT and the terms and conditions of this Agreement shall continue in effect for that time. OC San may, at its option, renew this Agreement for two (2) additional terms of one (1) year each, for a maximum contract duration of five (5) years.

SECTION 4. COMPENSATION

The total compensation payable to the CONSULTANT pursuant to this Agreement shall not exceed One Million Dollars (\$1,000,000) per year in accordance with the terms described in SECTION 3 - TERM. The compensation includes, but is not limited to, fees for professional engineering services based on the CONSULTANT's burdened labor rates, overhead, and profit, and fees from the CONSULTANT's subconsultants/subcontractors (Subconsultants/Subcontractors). The specific amount of compensation payable to the CONSULTANT for services rendered on an individual project, pursuant to a Task Order, shall be established for each Task Order and shall not exceed Five Hundred Thousand Dollars (\$500,000) per individual Task Order unless authorized by OC San's Board of Directors. The CONSULTANT agrees and acknowledges that the execution of this Agreement does not in any way guarantee that a Task Order will be issued to the CONSULTANT. Moreover, execution of this Agreement shall not entitle the CONSULTANT to any form of payment or compensation from OC San without OC San first having issued a written Task Order.

A. Total Compensation

Total compensation for any Task Order shall not exceed the amount indicated in the approved Task Order and any approved amendments thereto.

B. Labor

As a portion of the total compensation to be paid to CONSULTANT, OC San shall pay to CONSULTANT a sum equal to the burdened salaries (salaries plus benefits) actually paid

by CONSULTANT charged on an hourly-rate basis to the project and paid to CONSULTANT's personnel. For each Task Order, the cost of benefits for CONSULTANT shall be based on the fringe rates identified in Attachment "E" – Rates Proposal. Upon request of OC San, CONSULTANT shall provide OC San with certified payroll records of all employees' work that is charged to the project.

C. Overhead

As a portion of the total compensation to be paid to CONSULTANT, for each Task Order, OC San shall compensate CONSULTANT for overhead at the rates equal to the percentage of burdened labor as specified in Attachment "E" – Rates Proposal.

D. Profit

For each Task Order, profit shall be ten percent (10%) of burdened labor and overhead for all CONSULTANT fees and its Major Subconsultants (Architecture & Engineering [A&E] consulting services) whose fees for services are greater than or equal to \$100,000. Profit shall remain fixed through the term of this Agreement, inclusive of any renewals identified in Section 3 – TERM.

As a portion of the total compensation to be paid to CONSULTANT and its Major Subconsultants, OC San shall pay profit for all services rendered by CONSULTANT and its Major Subconsultants for the Task Order as specified in the previous paragraph.

E. Subconsultants

For each Task Order, any Minor Subconsultant (A&E consulting services) whose fees for services are less than \$100,000 and any Subconsultant/Subcontractor (non-A&E consulting services), CONSULTANT shall pay to Subconsultant/Subcontractor total compensation based on an established hourly rate schedule by personnel classification. The hourly rates shall cover burdened salary costs, overhead and profit. The compensation for each Minor Subconsultants and Subconsultants/Subcontractors (non-A&E consulting services), including both labor related fees, and direct costs shall not exceed the amount, as negotiated prior to award of a Task Order.

For each Task Order, any Major Subconsultant (A&E consulting services) whose fees for services are greater than or equal to \$100,000, total compensation for labor will be based on burdened labor rates, overhead, and profit, as negotiated prior to award of Task Order. Prior to award of Task Order, the CONSULTANT shall provide to OC San, if available, an audit performed for another public agency which documents the Major Subconsultant's labor burden rate and overhead rate. This audit shall be the most current available and have been conducted for a period that ended within twelve months of the task order proposal due date. This information shall be provided by CONSULTANT within ten (10) business days from request by OC San.

F. Direct Costs

OC San shall reimburse CONSULTANT and its Subconsultants/Subcontractors the actual costs of permits and associated fees, travel, licenses, and other services in an amount not to exceed the sums set forth in each approved Task Order. OC San shall also pay to CONSULTANT actual costs for equipment rentals, leases or purchases with prior written

approval of OC San. Upon request, CONSULTANT shall provide to OC San receipts and other documentary records to support CONSULTANT's request for reimbursement of these amounts, refer to Attachment "D" – Allowable Direct Costs. All incidental expenses shall be included in the overhead cost pursuant to this SECTION 4 – COMPENSATION.

G. Other Direct Costs

OC San will reimburse the CONSULTANT for Other Direct Costs incurred by CONSULTANT and its Subconsultants/Subcontractors due to modifications in the scope of work resulting from field investigations and field work required by the Task Order. These items may include special equipment, test equipment and tooling, and other materials and services not previously identified. Refer to Attachment "D" – Allowable Direct Costs for payment information.

H. Reimbursable Direct Costs

OC San will reimburse the CONSULTANT for reasonable travel and business expenses as described in this section and further described in Attachment "D" – Allowable Direct Costs. The reimbursement of the above-mentioned expenses will be based on an "accountable plan" as considered by the Internal Revenue Service (IRS). The plan includes a combination of reimbursements based upon receipts and a "per diem" component approved by the IRS. The most recent schedule of the per diem rates utilized by OC San may be found on the U.S. General Services Administration website at <https://www.gsa.gov/travel/plan-book/per-diem-rates>.

The CONSULTANT shall be responsible for the most economical and practical means of management of reimbursable costs inclusive, but not limited to, travel, lodging, and meals arrangements. OC San shall apply the most economic and practical method of reimbursement which may include reimbursements based upon receipts and/or "per diem" as deemed the most practical.

CONSULTANT shall be responsible for returning to OC San any excess reimbursements after the reimbursement has been paid by OC San.

Travel and travel arrangements – Any travel involving airfare, overnight stays, or multiple day attendance must be approved by OC San in advance.

Local travel is considered travel by the CONSULTANT within OC San general geographical area which includes Orange, Los Angeles, Ventura, San Bernardino, Riverside, San Diego, Imperial, and Kern Counties. Automobile mileage is reimbursable if CONSULTANT is required to utilize a personal vehicle for local travel.

Lodging – Overnight stays will not be approved by OC San for local travel. However, under certain circumstances overnight stay may be allowed at the discretion of OC San based on reasonableness of meeting schedules and the amount of time required for travel by the CONSULTANT. Such determination will be made on a case-by-case basis and at the discretion of OC San.

Travel Meals – Per diem rates as approved by the IRS shall be utilized for travel meals reimbursements. Per diem rates shall be applied to meals that are appropriate for travel times. Receipts are not required for the approved meals.

Additional details related to the reimbursement of the allowable direct costs are provided in Attachment "D" – Allowable Direct Costs.

I. Limitation of Costs

If, at any time, CONSULTANT estimates the cost of performing the services described in CONSULTANT's proposal will exceed seventy-five percent (75%) of the not to exceed amount of the Task Order, including any approved additional compensation, CONSULTANT shall notify OC San immediately, in writing. The written notice shall indicate the additional amount necessary to complete the services. Any cost incurred in excess of the approved not to exceed amount, without the express written consent of OC San's authorized representative, shall be at CONSULTANT's own risk. This written notice shall be provided separately from, and in addition to, any notification requirements contained in the CONSULTANT's invoice and monthly progress report. Failure to notify OC San that the services cannot be completed within the authorized not to exceed amount of a Task Order is a material breach of this Agreement.

J. Method of Payment:

The CONSULTANT shall submit for approval by OC San, monthly invoices based on the total services which have been satisfactorily completed and specifying a percentage of completion. The CONSULTANT's billings shall be certified for payment by OC San only after OC San has determined that the CONSULTANT has completed each applicable project task.

CONSULTANT shall submit separate invoices for each Task Order on a monthly basis. OC SAN will pay approved invoices within thirty days of receipt and approval by OC SAN of the payment request. OC SAN will notify CONSULTANT within fifteen days following receipt of an invoice, if any corrections to the invoice are required from the CONSULTANT and if OC SAN does not approve all or part of an invoice.

CONSULTANT understands that submitted costs are subject to Section 11 - AUDIT PROVISIONS, below.

K. Task Order Completion

Upon satisfactory completion by CONSULTANT of the work called for under the terms of the Task Order and upon acceptance of such work by OC San, CONSULTANT will be paid the unpaid balance of any money due for such work.

Upon satisfactory completion of the work performed under each Task Order and prior to final payment under each Task Order for such work or prior settlement upon termination of this Agreement, and as a condition precedent thereto, CONSULTANT shall execute and deliver to OC San a release of all claims against OC San arising under or by virtue of this Agreement other than such claims, if any, as may be specifically exempted by CONSULTANT from the operation of the release in stated amounts to be set forth therein.

L. False Claims

Pursuant to the California False Claims Act (Government Code Sections 12650-12655), any CONSULTANT that knowingly submits a false claim to OC San for compensation under the terms of this Agreement may be held liable for treble damages and up to a Ten Thousand Dollars (\$10,000) civil penalty for each false claim submitted. This section shall also be binding on all Subconsultants/Subcontractors.

The CONSULTANT or its Subconsultants/Subcontractors shall be deemed to have submitted a false claim when the CONSULTANT or its Subconsultants/Subcontractors: (a) knowingly presents or causes to be presented to an officer or employee of OC San a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by OC San; (c) conspires to defraud OC San by getting a false claim allowed or paid by OC San; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to OC San; or (e) is a beneficiary of an inadvertent submission of a false claim to OC San and fails to disclose the false claim to OC San within a reasonable time after discovery of the false claim.

M. California Department of Industrial Relations (DIR) Registration and Record of Wages:

To the extent the CONSULTANT's employees and/or its Subconsultants/Subcontractors who will perform work during the design, preconstruction, and construction phases of a construction contract for which Prevailing Wage Determinations have been issued by the DIR and as more specifically defined under Labor Code Section 1720 et seq., CONSULTANT and its Subconsultants/Subcontractors shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4, the work is subject to compliance monitoring and enforcement by the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776 and shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Penalties for non-compliance with the requirements of Labor Code section 1776 may be deducted from progress payments per Labor Code section 1776.

Pursuant to Labor Code section 1776, the CONSULTANT and its Subconsultants/Subcontractors shall furnish a copy of all certified payroll records to OC San and/or general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 16461(e).

N. Record of Expenses:

The CONSULTANT shall keep complete and accurate records of all costs and expenses incidental to services covered by this Agreement. Such records will be made available to OC San upon request.

O. Reallocation of Total Compensation:

OC San, by its Director of Engineering, shall have the right to approve a reallocation of the incremental amounts constituting the total compensation payable under the Task Order, provided that the total compensation for the Task Order is not increased.

SECTION 5. LIMITATIONS UPON SUBCONTRACTING AND ASSIGNMENT

The CONSULTANT shall not contract with any other person or entity to perform the services required without the written approval of OC San. This Agreement may not be assigned voluntarily or by operation of law without the prior written approval of OC San. If the CONSULTANT is permitted to subcontract any part of this Agreement by OC San, the CONSULTANT shall be responsible to OC San for the acts and omissions of its Subconsultant/Subcontractor, as it is for persons directly employed by the CONSULTANT. Nothing contained in this Agreement shall create any contractual relationship between any Subconsultant/Subcontractor and OC San. All persons engaged in the work will be considered employees of the CONSULTANT. OC San will deal directly with and will make all payments to the CONSULTANT.

SECTION 6. CHANGES TO SCOPE OF WORK

In the event of a change in the scope of work as requested by OC San or any other changes to the Task Order, the Parties shall execute an amendment to the Task Order setting forth with particularity all new terms of the Task Order, including, but not limited to, any additional compensation.

SECTION 7. DOCUMENT OWNERSHIP – CONSULTANT PERFORMANCE

- A. All documents in all forms (electronic, paper, etc.), including, but not limited to, studies, sketches, drawings, computer printouts, disk files, and electronic copies prepared in connection with or related to the scope of work shall be the property of OC San. OC San's ownership of these documents includes use of, reproduction or reuse of, and all incidental rights, whether or not the work for which they were prepared has been performed. OC San's ownership entitlement arises upon payment or any partial payment for work performed and includes ownership of any and all work product completed prior to that payment. This section shall apply whether the CONSULTANT's services are satisfied by the completion of the Agreement or are terminated in accordance with other provisions of this Agreement. Notwithstanding any other provision of this section or Agreement, the CONSULTANT shall have the right to make copies of all such plans, studies, sketches, drawings, computer printouts and disk files, and specifications.
- B. CONSULTANT shall not be responsible for damage caused by subsequent changes to or uses of the deliverables where the subsequent changes or uses are not authorized or approved by CONSULTANT, provided that the service rendered by CONSULTANT was not a proximate cause of the damage.
- C. Copies of Work Product

Upon completion of the work required for each Task Order, the CONSULTANT shall deliver to OC San the number of copies specified in the specific Task Order scope of work of the final report containing the CONSULTANT's findings, conclusions,

recommendations, and all supporting documentation and/or final design drawings and specifications. Each Task Order will define the requirements for the deliverables.

SECTION 8. INSURANCE

A. General:

- i. Insurance shall be issued and underwritten by insurance companies acceptable to OC San.
- ii. Insurers must have an "A-" Policyholder's Rating, or better, and Financial Rating of at least Class VIII, or better, in accordance with the most current A.M. Best's Guide Rating. However, OC San will accept State Compensation Insurance Fund for the required policy of Worker's Compensation Insurance subject to OC San's option to require a change in insurer in the event the State Fund financial rating is decreased below "B". Further, OC San will require CONSULTANT to substitute any insurer whose rating drops below the levels herein specified. Said substitution shall occur within twenty (20) days of written notice to CONSULTANT by OC San or its agent.
- iii. Coverage shall be in effect prior to the commencement of any work under this Agreement.

B. General Liability:

The CONSULTANT shall maintain during the life of this Agreement, including the period of warranty, Commercial General Liability Insurance written on an occurrence basis providing the following minimum limits of liability coverage: Two Million Dollars (\$2,000,000) per occurrence with Four Million Dollars (\$4,000,000) aggregate. If aggregate limits apply separately to this Agreement (as evidenced by submission of ISO form CG 25 03 or CG 25 04), then the aggregate limit may be equivalent to the per occurrence limit. Said insurance shall include coverage for the following hazards: Premises-Operations, blanket contractual liability (for this Agreement), products liability/completed operations (including any product manufactured or assembled), broad form property damage, blanket contractual liability, independent contractors liability, personal and advertising injury, mobile equipment, and cross liability and severability of interest clauses. A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement(s). If requested by OC San and applicable, XCU coverage (Explosion, Collapse and Underground) and Riggers/On Hook Liability must be included in the General Liability policy and coverage must be reflected on the submitted Certificate of Insurance.

C. Umbrella Excess Liability:

The minimum limits of general liability and automobile liability insurance required, as set forth herein, shall be provided for through either a single policy of primary insurance or a combination of policies of primary and umbrella excess coverage. Umbrella excess liability coverage shall be issued with limits of liability which, when combined with the primary insurance, will equal the minimum limits for general liability and automobile liability.

D. Automobile/Vehicle Liability Insurance:

The CONSULTANT shall maintain a policy of automobile liability insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and other vehicles providing the following minimum limit of liability coverage: combined single limit of One Million Dollars (\$1,000,000). A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement.

E. Drone Liability Insurance:

If a drone will be used, drone liability insurance must be maintained by the CONSULTANT in the amount of One Million Dollars (\$1,000,000) in a form acceptable to OC San.

F. Worker's Compensation Insurance:

The CONSULTANT shall provide such Workers' Compensation Insurance as required by the Labor Code of the State of California in the amount of the statutory limit, including Employer's Liability Insurance with a minimum limit of One Million Dollars (\$1,000,000) per occurrence. Such Worker's Compensation Insurance shall be endorsed to provide for a waiver of subrogation in favor of OC San. A statement on an insurance certificate will not be accepted in lieu of the actual endorsements unless the insurance carrier is the State of California Insurance Fund and the identifier "SCIF" and applicable endorsements are referenced on the certificate of insurance. If an exposure to Jones Act liability may exist, the insurance required herein shall include coverage for Jones Act claims.

G. Errors and Omissions/Professional Liability:

The CONSULTANT shall maintain in full force and effect, throughout the term of this Agreement, standard industry form professional liability/errors and omissions insurance coverage with coverage limits of not less than Two Million Dollars (\$2,000,000) in accordance with the provisions of this paragraph. If the policy of insurance is written on a "claims made" basis and in the aggregate, said policy shall be continued in full force and effect at all times during the term of this Agreement and for a period of five (5) years from the date of the completion of the services hereunder.

In the event of termination of said policy during this period, the CONSULTANT shall obtain continuing insurance coverage for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement. Said coverage shall be evidenced by either a new policy evidencing no gap in coverage or by separate extended "tail" coverage with the present or new carrier.

In the event the present policy of insurance is written on an "occurrence" basis, said policy shall be continued in full force and effect during the term of this Agreement or until completion of the services provided for in this Agreement, whichever is later. In the event of termination of said policy during this period, new coverage shall be obtained for the required period to insure for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement.

The CONSULTANT shall provide to OC San a certificate of insurance in a form acceptable to OC San indicating the deductible or self-retention amounts and the expiration date of said policy and shall provide renewal certificates not less than ten (10) days prior to the expiration of each policy term.

H. Proof of Coverage:

The CONSULTANT shall furnish OC San with original certificates and amendatory endorsements effecting coverage. Said policies and endorsements shall conform to the requirements herein stated. All certificates and endorsements must be received and accepted by OC San before work commences. CONSULTANT shall provide OC SAN with copies of its insurance certificates and amendatory endorsements affecting coverage. Confidential information may be redacted from said policies, provided that verification of coverage, name of carriers and agent/broker may not be redacted. Said policies and endorsements shall conform to the requirements herein stated. The following are approved forms that must be submitted as proof of coverage:

- | | |
|--|---|
| • Certificate of Insurance | ACORD Form 25 or other equivalent Certificate of Insurance form |
| • Additional Insurance (General Liability) | The combination of (ISO Forms) CG 2010 <u>and</u> CG 2037

All other additional insured endorsements must be submitted for approval by OC San and OC San may reject alternatives that provide different or less coverage to OC San. |
| • Additional Insured (Auto Liability) | Submit Endorsement provided by carrier for OC San's approval. |
| • Waiver of Subrogation | Submit workers' compensation waiver of subrogation endorsement provided by carrier for OC San's approval. |
| • Cancellation Notice | No endorsement is required. However, Vendor/Contractor is responsible for notifying OC San of any pending or actual insurance policy cancellation, as described in Article I. Cancellation and Policy Change Notice below. |

I. Cancellation and Policy Change Notice:

The CONSULTANT is required to notify OC San in writing of any insurance cancellation notice it receives or other knowledge of pending or actual insurance policy cancellation, within two (2) working days of receipt of such notice or acquisition of such knowledge. Additionally, the CONSULTANT is required to notify OC San in writing of any change in the terms of insurance, including reduction in coverage or increase in deductible/SIR, within two (2) working days of receipt of such notice or knowledge of same.

Said notices shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Contracts, Purchasing & Materials Management Division

J. Primary Insurance:

All liability policies shall contain a Primary and Non-Contributory Clause. Any other insurance maintained by OC San shall be excess and not contributing with the insurance provided by the CONSULTANT.

K. Separation of Insured:

All liability policies shall contain a "Separation of Insureds" clause.

L. Non-Limiting (if applicable):

Nothing in this document shall be construed as limiting in any way, nor shall it limit the indemnification provision contained in this Agreement or the extent to which the CONSULTANT may be held responsible for payment of damages to persons or property.

M. Deductibles and Self-Insured Retentions:

Any deductible and/or self-insured retention must be declared to OC San on the Certificate of Insurance. All deductibles and/or self-insured retentions require acceptance by OC San. At the option of OC San, either: a) the insurer shall reduce or eliminate such deductible or self-insured retention as respects OC San or b) the CONSULTANT shall provide a financial guarantee satisfactory to OC San guaranteeing payment of losses and related investigations, claim administration, and defense expenses. OC SAN will not invoke the option expressed in this paragraph unless it has reasonable cause to question CONSULTANT's financial strength.

N. Defense Costs:

Liability policies shall have a provision that defense costs for all insureds and additional insureds are paid in addition to and do not deplete any policy limits.

O. Subconsultants/Subcontractors:

The CONSULTANT shall be responsible to establish insurance requirements for Subconsultants/Subcontractors hired by the CONSULTANT. The insurance shall be in amounts and types reasonably sufficient to deal with the risk of loss involving the Subconsultants'/Subcontractors' operations and work.

P. Limits Are Minimums:

If the CONSULTANT maintains higher limits than any minimums shown above, then OC San requires and shall be entitled to coverage for the higher limits maintained by the CONSULTANT.

SECTION 9. PROJECT TEAM AND SUBCONSULTANTS

CONSULTANT shall provide to OC San, prior to execution of a Task Order, the names and full descriptions of all Subconsultants/Subcontractors and CONSULTANT's project team members anticipated to be used in performing work under a Task Order. In its proposal, CONSULTANT shall include a description of the work and services to be performed by each Subconsultant/Subcontractor and each of CONSULTANT's project team members. CONSULTANT shall include the respective compensation amounts for CONSULTANT and each Subconsultant/Subcontractor broken down as indicated in Section 4 – COMPENSATION, above.

There shall be no substitution of the listed Subconsultants/Subcontractors and CONSULTANT's project team members without prior written approval by OC San.

SECTION 10. ENGINEERING REGISTRATION

The CONSULTANT's personnel and its Subconsultants/Subcontractors shall be comprised of registered engineers and a staff of specialists and draftsmen in each department. The firm itself is not a registered engineer but represents and agrees that when the performance of this Agreement requires the services of a registered engineer, such services hereunder will be performed under the direct supervision of registered engineers who are registered in the State of California.

SECTION 11. AUDIT PROVISIONS

- A. OC San retains the reasonable right to access, review, examine, and audit any and all books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify that the CONSULTANT is in compliance with all the requirements under this Agreement. The CONSULTANT shall include OC San's right as described above in any and all of their subcontracts and shall ensure that these rights are binding upon all its Subconsultants/Subcontractors.
- B. OC San retains the right to examine CONSULTANT's books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify all direct and indirect costs, of whatever nature, which are claimed to have been incurred, or anticipated to be incurred, or to ensure CONSULTANT's compliance with all the requirements under this Agreement during the term of this Agreement and for a period of three (3) years after expiration or earlier termination of the Agreement.
- C. The CONSULTANT shall maintain complete and accurate records in accordance with generally accepted industry standard practices and OC San's policy. The CONSULTANT shall make available to OC San for review and audit all project-related accounting records and documents and any other financial data within fifteen (15) days after receipt of notice from OC San. Upon OC San's request, the CONSULTANT shall

submit exact duplicates of originals of all requested records to OC San. If an audit is performed, the CONSULTANT shall ensure that a qualified employee of the CONSULTANT will be available to assist OC San's auditor in obtaining all project related accounting records and documents and any other financial data.

SECTION 12. LEGAL RELATIONSHIP BETWEEN PARTIES

The legal relationship between the Parties is that of an independent contractor and nothing herein shall be deemed to transform the CONSULTANT, its staff, independent contractors, or its Subconsultants/Subcontractors, into agents or employees of OC San and shall obtain no rights to any benefits which accrue to OC San's employees. CONSULTANT's staff performing services under the Agreement shall at all times be employees and/or independent contractors of the CONSULTANT. The CONSULTANT shall monitor and control its staff and wages, salaries, and other amounts due directly to its staff in connection with the Agreement. The CONSULTANT shall be responsible for hiring, review, and termination of its staff and shall be accountable for all reports and obligations respecting them, such as social security, income tax withholding, unemployment compensation, workers' compensation insurance, and similar matters.

SECTION 13. NOTICES

All notices hereunder and communications regarding the interpretation of the terms of this Agreement, or changes thereto, shall be effected by delivery of said notices in person or by depositing said notices in the U.S. mail, registered or certified mail, return receipt requested, postage prepaid.

Notice shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Ludwig Lapus, Principal Contracts Administrator
Copy: Daniel Berokoff, Engineering Supervisor

Notice shall be mailed to CONSULTANT at:

Black and Veatch Corporation
220 Commerce, Suite 200
Irvine, CA 92602
Attention: Matthew Thomas

All communication regarding the Task Order will be addressed to the Project Manager. Direction from other OC San staff must be approved in writing by OC San's Project Manager prior to action from the CONSULTANT.

SECTION 14. TERMINATION

OC San may terminate this Agreement at any time, without cause, upon giving thirty (30) days written notice to the CONSULTANT. In the event of such termination, the CONSULTANT shall be entitled to compensation for work performed on a prorated basis through and including the effective date of termination.

The CONSULTANT shall be permitted to terminate this Agreement upon thirty (30) days written notice only if the CONSULTANT is not compensated for billed amounts in accordance with the provisions of this Agreement when the same are due. Notice of termination shall be mailed to OC San at the address listed in Section 13 – NOTICES, above.

SECTION 15. COMPLIANCE

The CONSULTANT certifies by the execution of this Agreement that it pays employees not less than the minimum wage as defined by law and that it does not discriminate in its employment with regard to race, color, religion, sex, or national origin; that it is in compliance with all Federal, State, and local directives and executive orders regarding non-discrimination in employment; and that it agrees to demonstrate positively and aggressively the principle of equal opportunity in employment.

The CONSULTANT shall comply with all applicable laws, ordinances, codes, and regulations of Federal, State, and local government in all aspects related to this Agreement and any work completed for OC San.

SECTION 16. AGREEMENT EXECUTION AUTHORIZATION

Both OC San and the CONSULTANT do covenant that each individual executing this document by and on behalf of each Party is a person duly authorized to execute this Agreement for that Party.

SECTION 17. DISPUTE RESOLUTION

In the event of a dispute arising between the Parties regarding performance or interpretation of this Agreement, the dispute shall be resolved by binding arbitration under the auspices of the Judicial Arbitration and Mediation Service (“JAMS”), or similar organization or entity conducting alternate dispute resolution services.

SECTION 18. ATTORNEY’S FEES, COSTS, AND NECESSARY DISBURSEMENTS

If any action at law or inequity or if any proceeding in the form of an Alternative Dispute Resolution is necessary to enforce or interpret the terms of this Agreement, the prevailing Party shall be entitled to reasonable attorney’s fees, costs and necessary disbursements in addition to any other relief to which it may be entitled.

SECTION 19. WARRANTY

CONSULTANT shall perform its services in accordance with generally accepted industry and professional standards. If, within the 12-month period following completion of its services, OC San informs the CONSULTANT that any part of the services fails to meet those standards, the CONSULTANT shall, within the time prescribed by OC San, take all such actions as are necessary to correct or complete the noted deficiency(ies).

SECTION 20. INDEMNIFICATION

To the fullest extent permitted by law, the CONSULTANT shall indemnify, defend (at the CONSULTANT’s sole cost and expense and with legal counsel approved by OC San,

which approval shall not be unreasonably withheld), protect and hold harmless OC San and all of OC San's officers, directors, employees, consultants, and agents (collectively the "Indemnified Parties"), from and against any and all claims, damages, liabilities, causes of action, suits, arbitration awards, losses, judgments, fines, penalties, costs, and expenses (including, without limitation, attorneys' fees, disbursements and court costs, and all other professional, expert, or CONSULTANT's fees and costs, and OC San's general and administrative expenses) individually, a "Claim" and collectively, "Claims", which may arise from or are in any manner related, directly or indirectly, to any work performed or any operations, activities, or services provided by the CONSULTANT in carrying out its obligations under this Agreement to the extent of the negligent, recklessness, and/or willful misconduct of the CONSULTANT, its principals, officers, agents, employees, CONSULTANT's suppliers, Subconsultants, Subcontractors, and/or anyone employed directly or indirectly by any of them, regardless of any contributing negligence or strict liability of an Indemnified Party. Notwithstanding the foregoing, nothing herein shall be construed to require the CONSULTANT to indemnify the Indemnified Parties from any Claim arising solely from:

- (A) the active negligence or willful misconduct of the Indemnified Parties; or
- (B) a natural disaster or other act of God, such as an earthquake; or
- (C) the independent action of a third party who is neither one of the Indemnified Parties nor the CONSULTANT, nor its principal, officer, agent, employee, nor the CONSULTANT's supplier, Subconsultant, Subcontractor, nor anyone employed directly or indirectly by any of them.

Exceptions (A) through (B) above shall not apply, and the CONSULTANT shall, to the fullest extent permitted by law, indemnify the Indemnified Parties from Claims arising from more than one cause if any such cause taken alone would otherwise result in the obligation to indemnify hereunder.

The CONSULTANT's liability for indemnification hereunder is in addition to any liability the CONSULTANT may have to OC San for a breach by the CONSULTANT of any of the provisions of this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit the CONSULTANT's indemnification obligation or other liability hereunder. The terms of this Agreement are contractual and the result of negotiation between the Parties. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code section 1654) that ambiguities are to be construed against the drafting Party shall not be employed in the interpretation of this Agreement.

SECTION 21. DUTY TO DEFEND

The duty to defend hereunder is wholly independent of and separate from the duty to indemnify and such duty to defend shall exist regardless of any ultimate liability of the CONSULTANT and shall be consistent with Civil Code section 2782.8. Such defense obligation shall arise immediately upon presentation of a Claim by any person if, without regard to the merit of the Claim, such Claim could potentially result in an obligation to indemnify one or more Indemnified Parties and upon written notice of such Claim being provided to the CONSULTANT. Payment to the CONSULTANT by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition precedent to enforcing such Indemnified Party's

rights to indemnification hereunder. In the event a final judgment, arbitration, award, order, settlement, or other final resolution expressly determines that the Claim did not arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONSULTANT, to any extent, then OC San will reimburse the CONSULTANT for the reasonable costs of defending the Indemnified Parties against such Claims.

The CONSULTANT's indemnification obligation hereunder shall survive the expiration or earlier termination of this Agreement until such time as action against the Indemnified Parties for such matter indemnified hereunder is fully and finally barred by the applicable statute of limitations.

SECTION 22. COMPLIANCE WITH OC SAN POLICIES AND PROCEDURES

The CONSULTANT shall be required to comply with all OC San policies and procedures. OC San requires the CONSULTANT and its Subconsultants/Subcontractors to follow and ensure their employees follow all Federal, State, and local regulations as well as OC San's safety standards while working at OC San locations. If during the course of the contract it is discovered that OC San's safety standards do not comply with Federal, State, or local regulations, then the CONSULTANT is required to follow the most stringent regulatory requirement at no additional cost to OC San. The CONSULTANT and all of its employees and Subconsultants/Subcontractors shall adhere to all applicable Contractor Safety Standards attached hereto as Attachment "L".

SECTION 23. GOVERNING LAW

This Agreement shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in Orange County in the event any action is brought in connection with this Agreement or the performance thereof.

SECTION 24. TIME OF ESSENCE

Time is of the essence in the performance of this Agreement.

SECTION 25. CONFLICT OF INTEREST

The CONSULTANT covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of the services contemplated by this Agreement. No person having such interest shall be employed by or associated with the CONSULTANT.

SECTION 26. ENTIRE AGREEMENT

This Agreement constitutes the entire understanding and agreement between the Parties and supersedes all previous negotiations between them pertaining to the subject matter hereof.

[THIS SECTION INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, this Agreement has been executed in the name of OC San and the CONSULTANT by their respective duly authorized officers, as of the date first written above.

BLACK AND VEATCH CORPORATION

By _____ Date _____

Printed Name & Title

ORANGE COUNTY SANITATION DISTRICT

By _____ Date _____
Chad P. Wanke
Board Chairman

By _____ Date _____
Kelly A. Lore
Clerk of the Board

By _____ Date _____
Ruth Zintzun
Finance & Procurement Manager

Attachments: Attachment "A" Sample Scope of Work
Attachment "B" Not Used
Attachment "C" Not Used
Attachment "D" Allowable Direct Costs
Attachment "E" Rates Proposal
Attachment "F" Not Used
Attachment "G" Not Used
Attachment "H" Not Used
Attachment "I" Not Used
Attachment "J" Not Used
Attachment "K" Not Used
Attachment "L" Contractor Safety Standards
Attachment "M" Iran Contracting Act Verification

ATTACHMENT “A”

SAMPLE SCOPE OF WORK

ATTACHMENT "A"

SAMPLE SCOPE OF WORK DESCRIPTION

OC SAN staff will develop detailed scope of work to be included in each Request for Task Order Proposal (RFTOP). The RFTOP will require Consultants to base their proposals on the scope of work included in the RFTOP. The remainder of this document are the templates typically used for design projects. Notes to scope editor are shown, although they will be removed before a scope of work is included in a RFTOP. Yellow highlighted text indicates where project specific information or a hypothetical example is given.

Design Task Order

Attachment A - Scope of Work

1 PROJECT REQUIREMENTS

Provide professional design engineering services for the project described herein.

1.1 BACKGROUND

- A. The Secondary Clarifiers at Plant No. 1 were constructed under Project Nos. P1-16 (1973), P1-36-2 (1995), and P1-82 (2005). A buried ductile iron plant water line around the secondary clarifiers feeds the scum sprayers and hose bibs. Because the plant water chemical composition is so corrosive to ductile iron, many failures have occurred.

1.2 GENERAL PROJECT DESCRIPTION

- A. This project includes the replacement of approximately 1800 feet of existing 6-inch ductile iron buried plant water piping, valves, fittings, and connections.
- B. A location map is provided in **Figure 1**.

[insert location map]

Figure 1 - Project Location Map

1.3 PROJECT ELEMENTS

- A. **Element 1: Piping** – Replace the existing 1,800 feet of 6-inch buried ductile iron plant water piping with new 6-inch plant water piping.
- B. Assumptions for level of effort:
 - 1. 1,600 feet of piping shall be below grade and 200 feet shall be either above or below grade.
 - a. 1,600 feet of piping is located around the Secondary Clarifiers. Assume high-density polyethylene (HDPE) as the pipe material with appropriate dimension ratio value.
 - b. 200 feet of piping will re-route the existing plant water line on the northwest end of the Secondary Clarifiers. Recent projects disconnected the existing plant water line at various locations resulting in an incomplete loop. This piping will reconnect the lines to allow for a complete loop. See Exhibit 13.1 for photos and Exhibit 13.3 for proposed routing design.
 - (1) For above grade pipe material, assume cement-lined ductile iron or fiberglass-reinforced plastic.
 - 2. Follow existing alignment with new pipe. New alignments shall be kept as close to the existing alignment as feasible.
 - a. The Secondary Effluent Junction Box No. 4 (SEJB-4), located at the southwest corner of the Secondary Clarifiers, is congested with various utilities, such as plant water, secondary effluent, and reclaimed water lines, and associated valves. Follow the existing alignment in this important area.
 - b. Concrete encasement of HDPE, located on the west side of the Secondary Clarifiers on Fuentes Road, was installed under project P1-102 (2006). Assume potholing is necessary to survey the edge of the concrete and confirm the limits of the existing concrete encasement

do not interfere with this project. As much as possible, the new alignment shall avoid the concrete encasement.

1.4 PROJECT SCHEDULE

- A. **Table 1** lists major project deliverables along with Orange County Sanitation District's (OC SAN) review and approval periods. CONSULTANT shall comply with the deadlines indicated in that table. OC SAN will consider an alternative CONSULTANT proposed schedule provided it is consistent with OC SAN resources, schedule constraints, and adds value. The negotiated durations will set the design baseline schedule.

Table 1 – Project Milestones and Deadlines

MILESTONE	DEADLINE
Kickoff Meeting	The kickoff meeting will be scheduled to coincide with the Project Notice to Proceed (NTP).
Preliminary Design Memo (PDM)	[XX] workdays from Preliminary Design Phase NTP.
OC SAN Review of PDM	10 workdays from receipt of PDM.
Submit Design Submittal 3 (DS3)	[YY] workdays from approval of PDM.
OC SAN Review of DS3	15 workdays from receipt of DS3.
Submit Final Design Submittal (FDS)	15 workdays from receipt of OC SAN comments on DS3.
OC SAN Review of FDS	10 workdays from receipt of FDS.
Submit Final Technical Plans and Specifications (FTPS)	15 workdays from receipt of OC SAN comments on FDS.
Total	[ZZZ] workdays

1.5 PROJECT MANAGEMENT

- A. CONSULTANT shall be responsible for managing CONSULTANT's project execution, schedule, budget, subconsultants, and coordination with other projects.
- B. Per **Exhibit 18**, PMWeb will be used for the management of this agreement.
- C. [Monthly Progress Report: Submit monthly progress reports at the same time as monthly invoices that include the following contents:
1. Work activities completed to date, in the current reporting period, and projected for the coming month.
 2. A brief description of outstanding issues and potential cost, schedule, quality impacts.
 3. Potential changes in the project scope or design scope.
 4. Any corrective actions needed to avoid potential impacts.
 5. Budget status: actual costs to date, costs to complete, and costs at completion.
 6. Schedule status: variances between scheduled and forecasted milestone dates.]
- D. Monthly Invoices: Provide a monthly cost report and/or invoices, which shall document the man-hours and billing rate for each person that works on the project, and shall include the following:
1. Budget
 2. Current billing period invoicing
 3. Previous billing period "total invoiced to date"
 4. Budget Amount Remaining
 5. Current billing period "total percent invoiced to date"

1.6 QUALITY CONTROL

- A. Provide Quality Assurance and Quality Control of the work.
- B. Provide documentation upon request that the CONSULTANT has performed a quality control review in-house, and all the comments have been addressed prior to providing any submittals to OC SAN.

1.7 PROJECT MEETINGS

- A. CONSULTANT shall communicate throughout the project to keep OC SAN apprised of the job, review work-in-progress, share information, discuss project submittals, present findings of technical analyses, receive and resolve comments, and obtain decisions and direction by OC SAN staff.
 - 1. **Table 2** below lists the anticipated meetings and site visits. Microsoft Teams shall be used for meetings. CONSULTANT will provide an agenda 2 workdays prior to each meeting. Meeting minutes will be submitted to the OC SAN project manager for review within 3 workdays of the meeting.

Table 2 – Project Assumed Meetings and Site Visits

DESIGN ACTIVITY	MEETINGS	SITE VISITS
Kickoff Meeting	1 (1-hour)	
PDM	Progress meeting (1-hour, every 2 weeks)	8 hours
PDM Workshop	2 (1-hour)	
DS3	Progress meeting (1-hour, every 2 weeks)	8 hours
DS3 Workshop	2 (1-hour)	
FDS	Progress meeting (1-hour, weekly)	
FDS Workshop	1 (1-hour)	
FTPS	Progress meeting (1-hour, weekly)	
Construction Services	6 hours	24 hours
Closeout	4 hours	12 hours

1.8 SUBMITTAL REVIEWS

- A. Deliverables (other than specifications) shall be submitted in searchable PDF format with no hard copy. Deliverables shall be bookmarked and hyperlinked for navigation per **Exhibit 14**.
- B. OC SAN has standardized on the use of Bluebeam Revu for reviewing and providing comments to PDF files. The purpose of the studio session is to provide review and collaboration. OC SAN staff will create the Bluebeam studio session, invite attendees, configure, and manage the studio session. Make drawing submittals in Bluebeam and respond to OC SAN comments in Bluebeam per **Exhibit 15**.

1.9 SPECIFICATIONS

- A. Prior to preparing or editing specifications, CONSULTANT shall meet with OC SAN staff to determine which OC SAN and CONSULTANT provided specifications should be included in the design. After discussions, all specifications should be loaded in Microsoft Teams (Teams) early in design and prior to editing for DS3.
- B. Tailor all specifications to project and remove requirements that do not apply.
- C. Unless a CONSULTANT is using their own specification management software, Specifications should remain in Teams for editing throughout design. Make all edits to specifications hosted in Teams. Unless agreed to, Specifications should not be removed from Teams or edited elsewhere.
- D. Provide specifications as Microsoft Word (Word) files with Track Changes enabled throughout design.

- E. OC SAN staff will review specifications during submittal review periods. CONSULTANT shall respond to OC SAN comments using Word “Reply” and “Resolve.” CONSULTANT shall “Reply” to each OC SAN comment describing how the comment will be addressed and revise the specification, as needed, to address the comment. “Resolve” will be used by the reviewer or designee to confirm their comment has been addressed. For more information see **Exhibit 16**.
- F. Prior to advertisement, all Word comments and revisions shall be Track Changes accepted, rejected, resolved, or deleted by OC SAN staff prior to bid.

2 PRELIMINARY DESIGN

All significant material and equipment decisions are to be made before the start of Design. At the end Preliminary Design, major design elements shall be fixed, and major equipment, footprints, and utility connection locations shall be well established. The extent of the design and the number and type of drawings shall also be established.

2.1 PRELIMINARY DESIGN AND PDM

- A. The PDM shall consist of a PowerPoint presentation. Present PDM findings and recommendations to OC SAN in a stakeholder meeting using the PowerPoint presentation mentioned in this section for consensus before the start of Design.
- B. Identify any equipment that has one competitive supplier (i.e., sole source). In those cases, recommend an appropriate procurement strategy compatible with California Law and OC SAN policies.
- C. Develop 2 conceptual design alternatives for the plant water piping alignment.
 - 1. Alternatives:
 - a. Reuse exiting alignment and existing points of connection
 - b. Alternate alignment along tunnels in and around secondary clarifiers
 - 2. Perform the following with each alternative:
 - a. Cost, benefit, and life cycle analysis.
 - b. Identify plant water construction shutdown requirements with estimated durations.
 - c. Identify construction access requirements and limitations.
 - d. Prepare preliminary drawings (sketches).
 - 3. Discuss the available alternatives with OC SAN. The PDM shall include the recommendation alternative.
- D. Prepare drawings showing:
 - 1. Proposed alignment of piping
 - 2. Proposed piping materials and quantities
 - 3. Proposed quantity and type of valves and valve cans
 - 4. Proposed connection points which include the following:
 - a. New replacement pipes connecting to existing main plant water line
 - b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
 - 5. Demolition of existing ductile iron pipes and valves
 - 6. Proposed design of new valves and valve cans
 - 7. Proposed design of connection points
 - a. New replacement pipes connecting to existing main plant water lines

- b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
- 8. Proposed design of pipe supports by typical detail and max spacing table
- E. Summarize key constructability and construction sequencing constraints.
 - 1. Develop process flow schematic of the components of the plant water system at Plant No. 1 that impact the pipelines being replaced.
- F. Prepare preliminary construction schedule.
- G. Prepare P&IDs: Fully detailed for each design "module", e.g., 1 pump set typical of all with proposed tagging strategy.
- H. Perform any potholing activities required for the concrete encasement survey specified under Element 1.
- I. Quantify soil contamination by determining the volume of excavation work needed to perform the Work. Coordinate with OC SAN ENGINEER to determine the area of excavation. Soil testing is not necessary.
- J. Develop testing requirements. Assume:
 - 1. Pressure leak and valve testing shall be included.
 - 2. Plant water operating pressure is 110 PSI.

2.2 PRELIMINARY DESIGN CONSTRUCTION COST ESTIMATE

- A. Prepare an AACE International Class 3 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01. Data used to prepare the cost estimate shall be included as an attachment to the PDM.
 - 1. Determine project specific and appropriate values to use for the percentages for profit, bond, and insurance.
 - 2. Costs for project level allowance, insurance, profit, and bond shall be cumulative and listed as individual line items.
 - 3. Allowances or mark ups should be well explained and itemized.
 - a. Include "Market Volatility" allowance of xx%.(revise based on the market conditions)
 - b. Do not setup allowance for change orders.
 - c. Do not escalate to midpoint of construction - this is by OC SAN.
 - 4. Specialty work should be recently (under 6 months) estimated by vendor.
 - a. For example, sewer bypassing services should be estimated by vendor (i.e., Rain 4 Rent).
 - b. Provide vendor quotes for high-cost equipment.
 - c. Minor equipment costs may be documented by written telephone quotations.
 - 5. Provide breakdown of lump sum costs.
 - 6. Show labor rates so they can be checked.
 - 7. Provide all back back up for all documentation obtained for the cost estimate purposes. The cost estimate back up shall have the date and the vendor name/contact name. If catalog price is used, provide the year of that publication.
- B. Prepare estimate of construction duration. The suggested construction duration shall take in considerations the verifiable lead time for all equipment.

3 DESIGN

Prepare biddable plans, technical specifications, other Bid Documents, and any associated design calculations, required to complete the Project Elements.

3.1 DS3 DELIVERABLES

- A. Meet at a 50% completion level with OC SAN staff to review design progress. Formal deliverables are not necessary. QA/QC is also not required for this preview.
- B. At this submittal, the design is essentially finished and submitted as complete. DS3 shall include all finished and checked plans and specifications. OC SAN staff will review DS3 and provide comments to the drawings and specifications. The CONSULTANT should be finished with no remaining design work except for OC SAN comments provided at DS3 review and their incorporation at FDS.
- C. [Prepare construction drawings in CAD conforming to OC SAN's CAD Manual. A CAD compliance check will be performed at DS3 (Exhibit 17, Chapter 8 explains the CAD compliance check, and Appendix D contains the "CAD Standards Compliance Checklist" summarizing all items checked by OC SAN). OC SAN will provide base layers and utilities for Work locations within the treatment plant boundaries.]

3.2 DS3 COST ESTIMATE

- A. Prepare an AACE International Class 2 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01 based on the DS3 design. Data used to prepare the cost estimate shall be included as an attachment to DS3.
- B. Prepare estimate of construction duration.

3.3 FDS DELIVERABLES

- A. Final Design Submittal (FDS) is for OC SAN to confirm all comments from DS3 have been addressed and incorporated and add any additional comments.

3.4 FTPS DOCUMENTS

- A. Final Technical Plans and Specifications is for the CONSULTANT to address and incorporate all comments and provide all necessary stamps and signatures for a complete bid package suitable for advertisement by OC SAN.

3.5 CONSTRUCTION COST ESTIMATE "ENGINEER'S ESTIMATE"

- A. 30 calendar days prior to advertisement, refresh the DS3 Class 2 cost estimate. Get updated vendor quotes used to prepare the DS3 cost estimate. This will become the Engineer's Estimate published in the front-end documents.

3.6 PERMITTING ASSISTANCE ([ALLOCATE 60 HOURS] [NOT INCLUDED IN THIS AGREEMENT])

- A. [For all applicable Project Elements of this Scope of Work, provide Bid Documents that ensure that the design complies with all conditions of existing permits and permits required to construct and implement this project. Testing, construction drawings, specifications, and supplemental drawings shall be prepared, as necessary, in the format required to obtain all permits.]
- B. Assist OC SAN in obtaining permits. This assistance shall include identifying applicable permits, completing required design, plan preparation, application forms provided by OC SAN, preparing supporting documentation for the permit applications as required by the issuing agency, furnishing the required number of copies of all construction drawings and exhibits, and attend meetings with permitting agencies at the request of OC SAN.
- C. Except for construction contractor-furnished permits, OC SAN staff will execute all applications. CONSULTANT shall determine the cost and requirements of all permits. All permit fees will be paid directly by OC SAN and will not be part of CONSULTANT's fee.
- D. Submit all supporting documentation in a timely fashion for all permits required for this project as described below.
 - 1. Caltrans Encroachment Permits

- a. Determine if encroachment permits or other types of permits are required by Caltrans for the design and construction phases. Provide the work necessary to obtain such permits including coordinating and attending meetings.

2. City/County Encroachment Permits

- a. Provide coordination, work effort, and attend meetings, as required, to obtain encroachment permits from each city and agency who has jurisdiction. Process the plans through the cities and agencies for approval, revise plans, and meet with them, as required, to obtain approval.]

3.7 BID SUPPORT SERVICES

- A. Provide answers to bidder's questions related to the design. Provide revisions to specifications and drawings when needed for addendum.
- B. Within 2 weeks of the bid opening date, prepare conformed document set (drawings, databases, specification, and other required materials) that incorporates the addenda. See requirements of OC SAN's CAD Manual.

3.8 POPULATE PMWEB LIST OF SUBMITTALS (ALLOCATE 24 HOURS)

- A. PMWeb is used to manage communication with the contractor. OC SAN uses an Excel template to populate the list of all submittals. The CONSULTANT shall review each project specification and complete the Submittal Items Template as follows:
 1. Enter the list of project specifications.
 2. Enter the list of commissioning packages. Commissioning packages are defined by Section 01810, Commissioning.
 3. Enter the following information for each submittal item.
 - a. Specification section: enter the specification section requiring the submittal.
 - b. Submittal Item description: enter the description of the submittal. Submittal items that refer to multiple specifications shall include referenced specification sections in brackets.
 - c. Comments: enter notes, comments, or clarifications. This field is optional.
 - d. Commissioning package: enter the commissioning package of the submittal item. Submittal items shall be duplicated when the same submittal is required for multiple commissioning packages. Items shall be separated into mobilization, general construction, or a commissioning package defined by the project specifications.
 - e. Phase: Identify which phase each submittal is required to be approved.
 - f. Retention: Specify if the submittal is a Project File or Facility Record based on OC SAN's Records Retention Policy.
 - g. Lead time: Specify the appropriate number of workdays that OC SAN has to review the particular submittal.
 - h. Load: Specify if the submittal should be loaded into PMWeb prior to NTP, upon contractor approval, or prior to the start of commissioning.
- B. OC SAN will provide a PMWeb Master Submittal Items template that includes the submittals required by OC SAN's Master Specifications. The CONSULTANT shall not deviate from the Master PMWeb Submittal Items, except as required by the project specific specifications. The CONSULTANT shall develop submittal items for specifications that are not part of OC SAN's Master Specifications.
- C. OC SAN will provide a 1-hour virtual training on the use of the PMWeb Master Submittal Items Template.
- D. The CONSULTANT shall populate, receive comments, address comments, and provide completed submittal form as follows:
 1. 20 workdays after advertisement date.

3.9 SAFETY AND RISK MEETING

- A. Ensure that an OC San Risk Management safety and security professional has been assigned to the project.
- B. CONSULTANT shall prepare and meet with OC San Risk Management personnel at all design stages to review Exhibit 11 Sample Full Project Safety Review Plan and Exhibit 12 Sample Risk Management Check List. This shall be completed in accordance with Exhibit 4 Risk Management Requirements.
- C. CONSULTANT shall update Exhibits 11 and 12 throughout the design phases. CONSULTANT shall provide OC San Risk Management with the final copies of Exhibit 11 and Exhibit 12 at completion of the Design Project.

4 CONSTRUCTION SERVICES

OC SAN will administer and provide field inspection for construction contracts. Construction and installation support services shall be provided by the CONSULTANT on an as-needed basis and as requested by OC SAN. The services are indicated below.

4.1 SUBMITTAL REVIEWS (ALLOCATE 15 HOURS)

- A. OC SAN will manage submittal review. The CONSULTANT shall use PMWeb to review and return comments to OC SAN. Return comments within 5 workdays.

4.2 REQUESTS FOR INFORMATION (RFIS) (ALLOCATE 15 HOURS)

- A. OC SAN will manage the processing of RFI's. When requested by OC SAN, CONSULTANT shall return written responses to OC SAN within 5 workdays of receipt of RFI using PMWeb. Generate necessary sketches, figures, and modifications to the drawings for clarifications.

4.3 PROGRESS MEETINGS AND SITE VISITS

- A. Refer to **Table 2**.

4.4 RECORD DRAWINGS

- A. Verify that the Contractor's As-Built set correctly reflects the information included in the approved shop drawings, RFIs, approved Field Change Orders, plan clarifications, plan changes, and other deviations from the conformed drawings, and that the information in the set is complete.
- B. Draft Record Drawings shall be submitted to OC SAN within 4 weeks of receipt from OC SAN of the approved Contractor's As-Built drawings. The Final Record Drawings shall be submitted within one week of receipt of OC SAN comments on the Draft Record Drawings.
- C. Prepare Draft Record Drawings based on the Final Field Markup Set for all drawings in accordance with the requirements in the CAD Manual. Submit the Draft Record Drawings to the OC SAN Resident Engineer. The Draft Record Drawings will be reviewed for content and CAD compliance by OC SAN staff. If no comments are identified, CONSULTANT shall prepare the Final Record Drawings and submit them along with the Contractor's field markup set to the Project Manager. For content and placement of record drawing stamp, see CAD Manual.
- D. Submit an electronic copy of the record drawings to OC SAN for review and approval. The acceptance of the record drawings shall be deemed a condition for completion of work.
- E. Contractor-generated drawings described in the Design Guidelines and the shop drawings will not be updated by CONSULTANT. The format and quantities for delivery of the submittals shall be listed below:

Contents	Draft Record Drawings	Final Record Drawings
All related electronic files, including CAD and compiled PDFs.	One copy to be uploaded to Microsoft Teams.	One copy to be uploaded to Microsoft Teams.

4.5 EQUIPMENT INFORMATION DATABASE (EID) (ALLOCATE [X] HOURS [NOT INCLUDED IN THIS AGREEMENT])

- A. OC SAN uses Maximo software to manage and track asset information. When new assets are added or existing assets are modified by a project, an EID Excel spreadsheet is used to populate or update Maximo asset information. CONSULTANT shall meet with OC SAN EIM staff to request an EID spreadsheet pre-populated with the new or modified assets. OC SAN staff will provide training on how to populate the EID spreadsheet. Field work will be needed to apply equipment tags and record equipment nameplate information and serial numbers to populate the EID. Coordinate with Maintenance Specialists (David Haug or designee, Div. 870) to walk new facilities to verify accuracy of P&IDs and EID.

4.6 [UPDATE BASELINE DRAWINGS]

5 STAFF ASSISTANCE

OC SAN staff member or designee assigned to work with CONSULTANT on the design of this project is Jessica Cheung. Phone (714) 593-7147, e-mail jcheung@ocsan.gov.

6 EXHIBITS

- A. Exhibits 1-3, 5-10 – Not Used
- B. Exhibit 4 – Risk Management Requirements
- C. Exhibit 11 – Sample Full Project Safety Review Plan
- D. Exhibit 12 – Sample Risk Management Checklist
- E. Exhibit 13 – Project Reference Material
 - a. 13.1 – Photos
 - b. 13.2 – Plant 1 Plant Water System Map
 - c. 13.3 – Proposed Design Idea (The CONSULTANT may start with this conceptual design.)
 - d. 13.4 – Proposed Valve Cans (The CONSULTANT may start with this conceptual design.)
 - e. 13.5 – Record Drawings (Available Upon Request)
 - (1) P1-82, Activated Sludge Plant Rehabilitation (2005)
 - (2) P1-36-2, Secondary Treatment Improvements at Plant No. 1 (1995)
 - (3) P1-16, 46 MGD Activated Sludge Plant at Reclamation Plant No. 1 (1973)
 - (4) P1-102, Secondary Activated Sludge Facility 2 at Plant No.1 (2006)
- F. Exhibit 14 – BlueBeam Designer Training for Submission
- G. Exhibit 15 – BlueBeam Designer User Training
- H. Exhibit 16 – Spec Review using Microsoft Word and Teams
- I. Exhibit 17 – [CAD Standard Manual](#)
- J. Exhibit 18 – PMWeb

JC:tk

PROFESSIONAL DESIGN SERVICES AGREEMENT

This PROFESSIONAL DESIGN SERVICES AGREEMENT (Agreement), to be effective this 1st day of July, 2024, is made and entered into by and between:

ORANGE COUNTY SANITATION DISTRICT
hereinafter referred to as "OC San"

AND

BROWN AND CALDWELL
hereinafter referred to as "CONSULTANT"

individually referred to as the "Party" and collectively as the "Parties".

RECITALS

WHEREAS, in accordance with Ordinance No. OC SAN-61 and pursuant to a Request for Qualifications ("Underlying RFQ"), the Board of Directors of OC San, by action on May 22, 2024, approved the award of the Agreement for **CONTRACT NO. FE24-00-03**, to CONSULTANT to provide services for selected projects on a task order (Task Order) basis from July 1, 2024 to June 30, 2027; and

WHEREAS, consistent with the Underlying RFQ, the CONSULTANT has been prequalified to perform services for the following project types: Project Type 1: Site Works, Building and Safety, Project Type 2: Linear and Collections, and Project Type 3: Process, Electrical and Instrumentation & Control (I&C); and

WHEREAS, for Task Orders estimated to cost \$100,000 or less, the Director of Engineering, with concurrence of the Purchasing Manager, may solicit a proposal from one (1) firm on the prequalified list, which will include the project types for which the consultants are prequalified; and

WHEREAS, the CONSULTANT is qualified to provide and has agreed to provide the necessary professional engineering and related services under this Agreement; and

WHEREAS, by this Agreement, the Parties intend to set forth the general terms and conditions that will apply to any specific project for which CONSULTANT is given a Task Order by OC San.

NOW, THEREFORE, OC San and the CONSULTANT mutually agree as follows:

SECTION 1. SCOPE OF AGREEMENT

OC San, at its sole discretion, may, from time to time during the term of this Agreement, issue a Request for Task Order Proposal ("RFTOP") setting forth the detailed requirements and scope of work to be performed on the identified project and thereafter, upon receipt of a proposal from the CONSULTANT, may issue a Task Order to proceed with the work. The scope of work will be in a form attached hereto as Attachment "A" – Sample Scope of Work.

Upon execution by OC San, the Task Order shall become an operative part of this Agreement. Should any conflict or inconsistency exist in the contract documents identified in this section, the conflict or inconsistency shall be resolved by applying the provisions in the highest priority document, which shall be determined in the following order of priority:

1. Agreement and any amendments thereto
2. the Task Order
3. the RFTOP

OC San shall furnish the CONSULTANT available studies, reports and other data pertinent to the CONSULTANT's service; obtain or authorize the CONSULTANT to obtain or provide additional reports and data as required; furnish to the CONSULTANT services of others required for the performance of the CONSULTANT's services hereunder, and the CONSULTANT shall be entitled to use and rely upon all such information and services provided by the OC San or others in performing the CONSULTANT's services under this Agreement.

SECTION 2. TASK ORDER ISSUANCE BY OC SAN

The Task Order issued by OC San shall, specifically or by reference to the RFTOP and corresponding proposal, set forth the terms that will apply to the specific project for which the services will be rendered. Those terms shall include, but not be limited to, scope of work, time for performance, and compensation.

SECTION 3. TERM

This Agreement shall commence on the effective date of this Agreement and terminate on June 30, 2027, unless further extended by written agreement signed by the Parties. Any work that is required by a Task Order and is not finished by the date of termination shall be continued and completed by the CONSULTANT and the terms and conditions of this Agreement shall continue in effect for that time. OC San may, at its option, renew this Agreement for two (2) additional terms of one (1) year each, for a maximum contract duration of five (5) years.

SECTION 4. COMPENSATION

The total compensation payable to the CONSULTANT pursuant to this Agreement shall not exceed One Million Dollars (\$1,000,000) per year in accordance with the terms described in SECTION 3 - TERM. The compensation includes, but is not limited to, fees for professional engineering services based on the CONSULTANT's burdened labor rates, overhead, and profit, and fees from the CONSULTANT's subconsultants/subcontractors (Subconsultants/Subcontractors). The specific amount of compensation payable to the CONSULTANT for services rendered on an individual project, pursuant to a Task Order, shall be established for each Task Order and shall not exceed Five Hundred Thousand Dollars (\$500,000) per individual Task Order unless authorized by OC San's Board of Directors. The CONSULTANT agrees and acknowledges that the execution of this Agreement does not in any way guarantee that a Task Order will be issued to the CONSULTANT. Moreover, execution of this Agreement shall not entitle the CONSULTANT to any form of payment or compensation from OC San without OC San first having issued a written Task Order.

A. Total Compensation

Total compensation for any Task Order shall not exceed the amount indicated in the approved Task Order and any approved amendments thereto.

B. Labor

As a portion of the total compensation to be paid to CONSULTANT, OC San shall pay to CONSULTANT a sum equal to the burdened salaries (salaries plus benefits) actually paid by CONSULTANT charged on an hourly-rate basis to the project and paid to CONSULTANT's personnel. For each Task Order, the cost of benefits for CONSULTANT shall be based on the fringe rates identified in Attachment "E" – Rates Proposal. Upon request of OC San, CONSULTANT shall provide OC San with certified payroll records of all employees' work that is charged to the project.

C. Overhead

As a portion of the total compensation to be paid to CONSULTANT, for each Task Order, OC San shall compensate CONSULTANT for overhead at the rates equal to the percentage of burdened labor as specified in Attachment "E" – Rates Proposal.

D. Profit

For each Task Order, profit shall be ten percent (10%) of burdened labor and overhead for all CONSULTANT fees and its Major Subconsultants (Architecture & Engineering [A&E] consulting services) whose fees for services are greater than or equal to \$100,000. Profit shall remain fixed through the term of this Agreement, inclusive of any renewals identified in Section 3 – TERM.

As a portion of the total compensation to be paid to CONSULTANT and its Major Subconsultants, OC San shall pay profit for all services rendered by CONSULTANT and its Major Subconsultants for the Task Order as specified in the previous paragraph.

E. Subconsultants

For each Task Order, any Minor Subconsultant (A&E consulting services) whose fees for services are less than \$100,000 and any Subconsultant/Subcontractor (non-A&E consulting services), CONSULTANT shall pay to Subconsultant/Subcontractor total compensation based on an established hourly rate schedule by personnel classification. The hourly rates shall cover burdened salary costs, overhead and profit. The compensation for each Minor Subconsultants and Subconsultants/Subcontractors (non-A&E consulting services), including both labor related fees, and direct costs shall not exceed the amount, as negotiated prior to award of a Task Order.

For each Task Order, any Major Subconsultant (A&E consulting services) whose fees for services are greater than or equal to \$100,000, total compensation for labor will be based on burdened labor rates, overhead, and profit, as negotiated prior to award of Task Order. Prior to award of Task Order, the CONSULTANT shall provide to OC San, if available, an audit performed for another public agency which documents the Major Subconsultant's labor burden rate and overhead rate. This audit shall be the most current available and

have been conducted for a period that ended within twelve months of the task order proposal due date. This information shall be provided by CONSULTANT within ten (10) business days from request by OC San.

F. Direct Costs

OC San shall reimburse CONSULTANT and its Subconsultants/Subcontractors the actual costs of permits and associated fees, travel, licenses, and other services in an amount not to exceed the sums set forth in each approved Task Order. OC San shall also pay to CONSULTANT actual costs for equipment rentals, leases or purchases with prior written approval of OC San. Upon request, CONSULTANT shall provide to OC San receipts and other documentary records to support CONSULTANT's request for reimbursement of these amounts, refer to Attachment "D" – Allowable Direct Costs. All incidental expenses shall be included in the overhead cost pursuant to this SECTION 4 – COMPENSATION.

G. Other Direct Costs

OC San will reimburse the CONSULTANT for Other Direct Costs incurred by CONSULTANT and its Subconsultants/Subcontractors due to modifications in the scope of work resulting from field investigations and field work required by the Task Order. These items may include special equipment, test equipment and tooling, and other materials and services not previously identified. Refer to Attachment "D" – Allowable Direct Costs for payment information.

H. Reimbursable Direct Costs

OC San will reimburse the CONSULTANT for reasonable travel and business expenses as described in this section and further described in Attachment "D" – Allowable Direct Costs. The reimbursement of the above-mentioned expenses will be based on an "accountable plan" as considered by the Internal Revenue Service (IRS). The plan includes a combination of reimbursements based upon receipts and a "per diem" component approved by the IRS. The most recent schedule of the per diem rates utilized by OC San may be found on the U.S. General Services Administration website at <https://www.gsa.gov/travel/plan-book/per-diem-rates>.

The CONSULTANT shall be responsible for the most economical and practical means of management of reimbursable costs inclusive, but not limited to, travel, lodging, and meals arrangements. OC San shall apply the most economic and practical method of reimbursement which may include reimbursements based upon receipts and/or "per diem" as deemed the most practical.

CONSULTANT shall be responsible for returning to OC San any excess reimbursements after the reimbursement has been paid by OC San.

Travel and travel arrangements – Any travel involving airfare, overnight stays, or multiple day attendance must be approved by OC San in advance.

Local travel is considered travel by the CONSULTANT within OC San general geographical area which includes Orange, Los Angeles, Ventura, San Bernardino, Riverside, San Diego, Imperial, and Kern Counties. Automobile mileage is reimbursable if CONSULTANT is required to utilize a personal vehicle for local travel.

Lodging – Overnight stays will not be approved by OC San for local travel. However, under certain circumstances overnight stay may be allowed at the discretion of OC San based on reasonableness of meeting schedules and the amount of time required for travel by the CONSULTANT. Such determination will be made on a case-by-case basis and at the discretion of OC San.

Travel Meals – Per diem rates as approved by the IRS shall be utilized for travel meals reimbursements. Per diem rates shall be applied to meals that are appropriate for travel times. Receipts are not required for the approved meals.

Additional details related to the reimbursement of the allowable direct costs are provided in Attachment “D” – Allowable Direct Costs.

I. Limitation of Costs

If, at any time, CONSULTANT estimates the cost of performing the services described in CONSULTANT's proposal will exceed seventy-five percent (75%) of the not to exceed amount of the Task Order, including any approved additional compensation, CONSULTANT shall notify OC San immediately, in writing. The written notice shall indicate the additional amount necessary to complete the services. Any cost incurred in excess of the approved not to exceed amount, without the express written consent of OC San's authorized representative, shall be at CONSULTANT's own risk. This written notice shall be provided separately from, and in addition to, any notification requirements contained in the CONSULTANT's invoice and monthly progress report. Failure to notify OC San that the services cannot be completed within the authorized not to exceed amount of a Task Order is a material breach of this Agreement.

J. Method of Payment:

The CONSULTANT shall submit for approval by OC San, monthly invoices based on the total services which have been satisfactorily completed and specifying a percentage of completion. The CONSULTANT's billings shall be certified for payment by OC San only after OC San has determined that the CONSULTANT has completed each applicable project task.

CONSULTANT shall submit separate invoices for each Task Order on a monthly basis.

CONSULTANT understands that submitted costs are subject to Section 11 - AUDIT PROVISIONS, below.

K. Task Order Completion

Upon satisfactory completion by CONSULTANT of the work called for under the terms of the Task Order and upon acceptance of such work by OC San, CONSULTANT will be paid the unpaid balance of any money due for such work.

Upon satisfactory completion of the work performed under each Task Order and prior to final payment under each Task Order for such work or prior settlement upon termination of this Agreement, and as a condition precedent thereto, CONSULTANT shall execute and

deliver to OC San a release of all claims against OC San arising under or by virtue of this Agreement other than such claims, if any, as may be specifically exempted by CONSULTANT from the operation of the release in stated amounts to be set forth therein.

L. False Claims

Pursuant to the California False Claims Act (Government Code Sections 12650-12655), any CONSULTANT that knowingly submits a false claim to OC San for compensation under the terms of this Agreement may be held liable for treble damages and up to a Ten Thousand Dollars (\$10,000) civil penalty for each false claim submitted. This section shall also be binding on all Subconsultants/Subcontractors.

The CONSULTANT or its Subconsultants/Subcontractors shall be deemed to have submitted a false claim when the CONSULTANT or its Subconsultants/Subcontractors: (a) knowingly presents or causes to be presented to an officer or employee of OC San a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by OC San; (c) conspires to defraud OC San by getting a false claim allowed or paid by OC San; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to OC San; or (e) is a beneficiary of an inadvertent submission of a false claim to OC San and fails to disclose the false claim to OC San within a reasonable time after discovery of the false claim.

M. California Department of Industrial Relations (DIR) Registration and Record of Wages:

To the extent the CONSULTANT's employees and/or its Subconsultants/Subcontractors who will perform work during the design, preconstruction, and construction phases of a construction contract for which Prevailing Wage Determinations have been issued by the DIR and as more specifically defined under Labor Code Section 1720 et seq., CONSULTANT and its Subconsultants/Subcontractors shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4, the work is subject to compliance monitoring and enforcement by the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776 and shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Penalties for non-compliance with the requirements of Labor Code section 1776 may be deducted from progress payments per Labor Code section 1776.

Pursuant to Labor Code section 1776, the CONSULTANT and its Subconsultants/Subcontractors shall furnish a copy of all certified payroll records to OC San and/or general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 16461(e).

N. Record of Expenses:

The CONSULTANT shall keep complete and accurate records of all costs and expenses incidental to services covered by this Agreement. Such records will be made available to OC San upon request.

O. Reallocation of Total Compensation:

OC San, by its Director of Engineering, shall have the right to approve a reallocation of the incremental amounts constituting the total compensation payable under the Task Order, provided that the total compensation for the Task Order is not increased.

SECTION 5. LIMITATIONS UPON SUBCONTRACTING AND ASSIGNMENT

The CONSULTANT shall not contract with any other person or entity to perform the services required without the written approval of OC San. This Agreement may not be assigned voluntarily or by operation of law without the prior written approval of OC San. If the CONSULTANT is permitted to subcontract any part of this Agreement by OC San, the CONSULTANT shall be responsible to OC San for the acts and omissions of its Subconsultant/Subcontractor, as it is for persons directly employed by the CONSULTANT. Nothing contained in this Agreement shall create any contractual relationship between any Subconsultant/Subcontractor and OC San. All persons engaged in the work will be considered employees of the CONSULTANT. OC San will deal directly with and will make all payments to the CONSULTANT.

SECTION 6. CHANGES TO SCOPE OF WORK

In the event of a change in the scope of work as requested by OC San or any other changes to the Task Order, the Parties shall execute an amendment to the Task Order setting forth with particularity all new terms of the Task Order, including, but not limited to, any additional compensation.

SECTION 7. DOCUMENT OWNERSHIP – CONSULTANT PERFORMANCE

- A. All documents in all forms (electronic, paper, etc.), including, but not limited to, studies, sketches, drawings, computer printouts, disk files, and electronic copies prepared in connection with or related to the scope of work shall be the property of OC San. OC San's ownership of these documents includes use of, reproduction or reuse of, and all incidental rights, whether or not the work for which they were prepared has been performed. OC San's ownership entitlement arises upon payment or any partial payment for work performed and includes ownership of any and all work product completed prior to that payment. This section shall apply whether the CONSULTANT's services are satisfied by the completion of the Agreement or are terminated in accordance with other provisions of this Agreement. Notwithstanding any other provision of this section or Agreement, the CONSULTANT shall have the right to make copies of all such plans, studies, sketches, drawings, computer printouts and disk files, and specifications.
- B. CONSULTANT shall not be responsible for damage caused by subsequent changes to or uses of the deliverables where the subsequent changes or uses are not authorized or approved by CONSULTANT, provided that the service rendered by CONSULTANT was not a proximate cause of the damage.

C. Copies of Work Product

Upon completion of the work required for each Task Order, the CONSULTANT shall deliver to OC San the number of copies specified in the specific Task Order scope of work of the final report containing the CONSULTANT's findings, conclusions, recommendations, and all supporting documentation and/or final design drawings and specifications. Each Task Order will define the requirements for the deliverables.

SECTION 8. INSURANCE

A. General:

- i. Insurance shall be issued and underwritten by insurance companies acceptable to OC San.
- ii. Insurers must have an "A-" Policyholder's Rating, or better, and Financial Rating of at least Class VIII, or better, in accordance with the most current A.M. Best's Guide Rating. However, OC San will accept State Compensation Insurance Fund for the required policy of Worker's Compensation Insurance subject to OC San's option to require a change in insurer in the event the State Fund financial rating is decreased below "B". Further, OC San will require CONSULTANT to substitute any insurer whose rating drops below the levels herein specified. Said substitution shall occur within twenty (20) days of written notice to CONSULTANT by OC San or its agent.
- iii. Coverage shall be in effect prior to the commencement of any work under this Agreement.

B. General Liability:

The CONSULTANT shall maintain during the life of this Agreement, including the period of warranty, Commercial General Liability Insurance written on an occurrence basis providing the following minimum limits of liability coverage: Two Million Dollars (\$2,000,000) per occurrence with Four Million Dollars (\$4,000,000) aggregate. If aggregate limits apply separately to this Agreement (as evidenced by submission of ISO form CG 25 03 or CG 25 04 or equivalent), then the aggregate limit may be equivalent to the per occurrence limit. Said insurance shall include coverage for the following hazards: Premises-Operations, products liability/completed operations (including any product manufactured or assembled), broad form property damage, contractual liability, independent contractors liability, personal and advertising injury, mobile equipment, vicarious liability, and cross liability and severability of interest clauses. A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement(s). If requested by OC San and applicable, XCU coverage (Explosion, Collapse and Underground) must be included in the General Liability policy and coverage must be reflected on the submitted Certificate of Insurance.

C. Umbrella Excess Liability:

The minimum limits of general liability and automobile liability insurance required, as set forth herein, shall be provided for through either a single policy of primary insurance or a

combination of policies of primary and umbrella excess coverage. Umbrella excess liability coverage shall be issued with limits of liability which, when combined with the primary insurance, will equal the minimum limits for general liability and automobile liability.

D. Automobile/Vehicle Liability Insurance:

The CONSULTANT shall maintain a policy of automobile liability insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and other vehicles providing the following minimum limit of liability coverage: combined single limit of One Million Dollars (\$1,000,000). A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement.

E. Drone Liability Insurance:

If a drone will be used, drone liability insurance must be maintained by the CONSULTANT in the amount of One Million Dollars (\$1,000,000) in a form acceptable to OC San.

F. Worker's Compensation Insurance:

The CONSULTANT shall provide such Workers' Compensation Insurance as required by the Labor Code of the State of California in the amount of the statutory limit, including Employer's Liability Insurance with a minimum limit of One Million Dollars (\$1,000,000) per occurrence. Such Worker's Compensation Insurance shall be endorsed to provide for a waiver of subrogation in favor of OC San. A statement on an insurance certificate will not be accepted in lieu of the actual endorsements unless the insurance carrier is the State of California Insurance Fund and the identifier "SCIF" and applicable endorsements are referenced on the certificate of insurance. If an exposure to Jones Act liability may exist, the insurance required herein shall include coverage for Jones Act claims.

G. Errors and Omissions/Professional Liability:

The CONSULTANT shall maintain in full force and effect, throughout the term of this Agreement, standard industry form professional liability/errors and omissions insurance coverage with coverage limits of not less than Two Million Dollars (\$2,000,000) in accordance with the provisions of this paragraph. If the policy of insurance is written on a "claims made" basis, said policy shall be continued in full force and effect at all times during the term of this Agreement and for a period of five (5) years from the date of the completion of the services hereunder.

In the event of termination of said policy during this period, the CONSULTANT shall obtain continuing insurance coverage for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement. Said coverage shall be evidenced by either a new policy evidencing no gap in coverage or by separate extended "tail" coverage with the present or new carrier.

In the event the present policy of insurance is written on an "occurrence" basis, said policy shall be continued in full force and effect during the term of this Agreement or until completion of the services provided for in this Agreement, whichever is later. In the event of

termination of said policy during this period, new coverage shall be obtained for the required period to insure for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement.

The CONSULTANT shall provide to OC San a certificate of insurance in a form acceptable to OC San indicating the deductible or self-retention amounts and the expiration date of said policy and shall provide renewal certificates not less than ten (10) days prior to the expiration of each policy term.

H. Proof of Coverage:

The CONSULTANT shall furnish OC San with original certificates and amendatory endorsements effecting coverage. Said certificates and endorsements shall conform to the requirements herein stated. All certificates and endorsements must be received and accepted by OC San before work commences. CONSULTANT shall provide OC San with copies of its insurance certificates and amendatory endorsements affecting coverage. Confidential information may be redacted from said policies, provided that verification of coverage, name of carriers and agent/broker may not be redacted. Said policies and endorsements shall conform to the requirements herein stated. The following are approved forms that must be submitted as proof of coverage:

- | | |
|--|--|
| • Certificate of Insurance | ACORD Form 25 or other equivalent Certificate of Insurance form |
| • Additional Insurance (General Liability) | The combination of (ISO Forms) CG 2010 <u>and</u> CG 2037 or equivalent |
| | All other additional insured endorsements must be submitted for approval by OC San and OC San may reject alternatives that provide different or less coverage to OC San. |
| • Additional Insured (Auto Liability) | Submit Endorsement provided by carrier for OC San's approval. |
| • Waiver of Subrogation | Submit workers' compensation waiver of subrogation endorsement provided by carrier for OC San's approval. |
| • Cancellation Notice | No endorsement is required. However, Vendor/Contractor is responsible for notifying OC San of any pending or actual insurance policy cancellation, as described in Article I. Cancellation and Policy Change Notice below. |

I. Cancellation and Policy Change Notice:

The CONSULTANT is required to notify OC San in writing of any insurance cancellation notice it receives or other knowledge of pending or actual insurance policy cancellation,

within two (2) working days of receipt of such notice or acquisition of such knowledge. Additionally, the CONSULTANT is required to notify OC San in writing of any material change in the terms of insurance, including reduction in coverage or increase in deductible/SIR, within two (2) working days of receipt of such notice or knowledge of same.

Said notices shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Contracts, Purchasing & Materials Management Division

J. Primary Insurance:

The general and automobile liability policies shall contain a Primary and Non-Contributory Clause. Any other insurance maintained by OC San shall be excess and not contributing with the insurance provided by the CONSULTANT.

K. Separation of Insured:

All liability policies shall contain a "Separation of Insureds" clause.

L. Non-Limiting (if applicable):

Nothing in this document shall be construed as limiting in any way, nor shall it limit the indemnification provision contained in this Agreement or the extent to which the CONSULTANT may be held responsible for payment of damages to persons or property.

M. Deductibles and Self-Insured Retentions:

Any deductible and/or self-insured retention must be declared to OC San on the Certificate of Insurance. All deductibles and/or self-insured retentions require acceptance by OC San. At the option of OC San, either: a) the insurer shall reduce or eliminate such deductible or self-insured retention as respects OC San or b) the CONSULTANT shall provide a financial guarantee satisfactory to OC San guaranteeing payment of losses and related investigations, claim administration, and defense expenses. OC SAN will not invoke the option expressed in this paragraph unless it has reasonable cause to question CONSULTANT's financial strength.

N. Defense Costs:

Liability policies (except Errors and Omissions/Professional Liability) shall have a provision that defense costs for all insureds and additional insureds are paid in addition to and do not deplete any policy limits.

O. Subconsultants/Subcontractors:

The CONSULTANT shall be responsible to establish insurance requirements for Subconsultants/Subcontractors hired by the CONSULTANT. The insurance shall be in

amounts and types reasonably sufficient to deal with the risk of loss involving the Subconsultants'/Subcontractors' operations and work.

P. Limits Are Minimums:

If the CONSULTANT maintains higher limits than any minimums shown above, then OC San requires and shall be entitled to coverage for the higher limits maintained by the CONSULTANT. Nothing in this section, however, requires CONSULTANT in the absence of litigation to reveal its Errors and Omissions/Professional Liability limits beyond that required above in Section 8.

SECTION 9. PROJECT TEAM AND SUBCONSULTANTS

CONSULTANT shall provide to OC San, prior to execution of a Task Order, the names and full descriptions of all Subconsultants/Subcontractors and CONSULTANT's project team members anticipated to be used in performing work under a Task Order. In its proposal, CONSULTANT shall include a description of the work and services to be performed by each Subconsultant/Subcontractor and each of CONSULTANT's project team members. CONSULTANT shall include the respective compensation amounts for CONSULTANT and each Subconsultant/Subcontractor broken down as indicated in Section 4 – COMPENSATION, above.

There shall be no substitution of the listed Subconsultants/Subcontractors and CONSULTANT's project team members without prior written approval by OC San.

SECTION 10. ENGINEERING REGISTRATION

The CONSULTANT's personnel and its Subconsultants/Subcontractors shall be comprised of registered engineers and a staff of specialists and draftsmen in each department. The firm itself is not a registered engineer but represents and agrees that when the performance of this Agreement requires the services of a registered engineer, such services hereunder will be performed under the direct supervision of registered engineers who are registered in the State of California.

SECTION 11. AUDIT PROVISIONS

- A. OC San retains the reasonable right to access, review, examine, and audit any and all books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify that the CONSULTANT is in compliance with all the requirements under this Agreement. The CONSULTANT shall include OC San's right as described above in any and all of their subcontracts and shall ensure that these rights are binding upon all its Subconsultants/Subcontractors.
- B. OC San retains the right to examine CONSULTANT's books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify all direct and indirect costs, of whatever nature, which are claimed to have been incurred, or anticipated to be incurred, or to ensure CONSULTANT's compliance with all the requirements under this Agreement during the term of this Agreement and for a period of three (3) years after expiration or earlier termination of the Agreement.

- C. The CONSULTANT shall maintain complete and accurate records in accordance with Generally Accepted Accounting Principles (GAAP). The CONSULTANT shall make available to OC San for review and audit all project-related accounting records and documents and any other financial data within fifteen (15) days after receipt of notice from OC San. Upon OC San's request, the CONSULTANT shall submit exact duplicates of originals of all requested records to OC San. If an audit is performed, the CONSULTANT shall ensure that a qualified employee of the CONSULTANT will be available to assist OC San's auditor in obtaining all project related accounting records and documents and any other financial data.

SECTION 12. LEGAL RELATIONSHIP BETWEEN PARTIES

The legal relationship between the Parties is that of an independent contractor and nothing herein shall be deemed to transform the CONSULTANT, its staff, independent contractors, or its Subconsultants/Subcontractors, into agents or employees of OC San and shall obtain no rights to any benefits which accrue to OC San's employees. CONSULTANT's staff performing services under the Agreement shall at all times be employees and/or independent contractors of the CONSULTANT. The CONSULTANT shall monitor and control its staff and wages, salaries, and other amounts due directly to its staff in connection with the Agreement. The CONSULTANT shall be responsible for hiring, review, and termination of its staff and shall be accountable for all reports and obligations respecting them, such as social security, income tax withholding, unemployment compensation, workers' compensation insurance, and similar matters.

SECTION 13. NOTICES

All notices hereunder and communications regarding the interpretation of the terms of this Agreement, or changes thereto, shall be effected by delivery of said notices in person or by depositing said notices in the U.S. mail, registered or certified mail, return receipt requested, postage prepaid.

Notice shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Ludwig Lapus, Principal Contracts Administrator
Copy: Daniel Berokoff, Engineering Supervisor

Notice shall be mailed to CONSULTANT at:

Brown and Caldwell
18500 Von Karman Avenue, Suite 800
Irvine, CA 92612
Attention: Mike Puccio

All communication regarding the Task Order will be addressed to the Project Manager. Direction from other OC San staff must be approved in writing by OC San's Project Manager prior to action from the CONSULTANT.

SECTION 14. TERMINATION

OC San may terminate this Agreement at any time, without cause, upon giving thirty (30) days written notice to the CONSULTANT. In the event of such termination, the CONSULTANT shall be entitled to compensation for work performed on a prorated basis through and including the effective date of termination. OC SAN may also terminate this Agreement for cause but only after providing CONSULTANT written notice of the breach and a period of ten (10) days to cure.

The CONSULTANT shall be permitted to terminate this Agreement upon thirty (30) days written notice only if the CONSULTANT is not compensated for billed amounts in accordance with the provisions of this Agreement when the same are due. Notice of termination shall be mailed to OC San at the address listed in Section 13 – NOTICES, above.

SECTION 15. COMPLIANCE

The CONSULTANT certifies by the execution of this Agreement that it pays employees not less than the minimum wage as defined by law and that it does not discriminate in its employment with regard to race, color, religion, sex, or national origin; that it is in compliance with all Federal, State, and local directives and executive orders regarding non-discrimination in employment; and that it agrees to demonstrate positively and aggressively the principle of equal opportunity in employment.

The CONSULTANT shall comply with all applicable laws, ordinances, codes, and regulations of Federal, State, and local government in all aspects related to this Agreement and any work completed for OC San.

SECTION 16. AGREEMENT EXECUTION AUTHORIZATION

Both OC San and the CONSULTANT do covenant that each individual executing this document by and on behalf of each Party is a person duly authorized to execute this Agreement for that Party.

SECTION 17. DISPUTE RESOLUTION

In the event of a dispute arising between the Parties regarding performance or interpretation of this Agreement, the dispute shall be resolved by binding arbitration under the auspices of the Judicial Arbitration and Mediation Service (“JAMS”), or similar organization or entity conducting alternate dispute resolution services.

SECTION 18. ATTORNEY’S FEES, COSTS, AND NECESSARY DISBURSEMENTS

If any action at law or inequity or if any proceeding in the form of an Alternative Dispute Resolution is necessary to enforce or interpret the terms of this Agreement, the prevailing Party shall be entitled to reasonable attorney’s fees, costs and necessary disbursements in addition to any other relief to which it may be entitled.

SECTION 19. WARRANTY

CONSULTANT shall perform its services in accordance with generally accepted industry and professional standards. If, within the 12-month period following completion of its services,

OC San informs the CONSULTANT that any part of the services fails to meet those standards, the CONSULTANT shall, within the time prescribed by OC San, take all such actions as are necessary to correct or complete the noted deficiency(ies).

SECTION 20. INDEMNIFICATION

To the fullest extent permitted by law, the CONSULTANT shall indemnify, defend (at the CONSULTANT's sole cost and expense and with legal counsel approved by OC San, which approval shall not be unreasonably withheld), protect and hold harmless OC San and all of OC San's officers, directors, employees, consultants, and agents (collectively the "Indemnified Parties"), from and against any and all claims, damages, liabilities, causes of action, suits, arbitration awards, losses, judgments, fines, penalties, costs, and expenses (including, without limitation, attorneys' fees, disbursements and court costs, and all other professional, expert, or CONSULTANT's fees and costs, and OC San's general and administrative expenses) individually, a "Claim" and collectively, "Claims", which may arise from or are in any manner related, directly or indirectly, to any work performed or any operations, activities, or services provided by the CONSULTANT in carrying out its obligations under this Agreement to the extent of the negligent, recklessness, and/or willful misconduct of the CONSULTANT, its principals, officers, agents, employees, CONSULTANT's suppliers, Subconsultants, Subcontractors, and/or anyone employed directly or indirectly by any of them, regardless of any contributing negligence or strict liability of an Indemnified Party. Notwithstanding the foregoing, nothing herein shall be construed to require the CONSULTANT to indemnify the Indemnified Parties from any Claim arising solely from:

- (A) the active negligence or willful misconduct of the Indemnified Parties; or
- (B) a natural disaster or other act of God, such as an earthquake; or
- (C) the independent action of a third party who is neither one of the Indemnified Parties nor the CONSULTANT, nor its principal, officer, agent, employee, nor the CONSULTANT's supplier, Subconsultant, Subcontractor, nor anyone employed directly or indirectly by any of them.

Exceptions (A) through (B) above shall not apply, and the CONSULTANT shall, to the fullest extent permitted by law, indemnify the Indemnified Parties from Claims arising from more than one cause if any such cause taken alone would otherwise result in the obligation to indemnify hereunder.

The CONSULTANT's liability for indemnification hereunder is in addition to any liability the CONSULTANT may have to OC San for a breach by the CONSULTANT of any of the provisions of this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit the CONSULTANT's indemnification obligation or other liability hereunder. The terms of this Agreement are contractual and the result of negotiation between the Parties. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code section 1654) that ambiguities are to be construed against the drafting Party shall not be employed in the interpretation of this Agreement.

SECTION 21. DUTY TO DEFEND

The duty to defend hereunder is wholly independent of and separate from the duty to indemnify and such duty to defend shall exist regardless of any ultimate liability of the CONSULTANT and

shall be consistent with Civil Code section 2782.8. Such defense obligation shall arise immediately upon presentation of a Claim by any person if, without regard to the merit of the Claim, such Claim could potentially result in an obligation to indemnify one or more Indemnified Parties and upon written notice of such Claim being provided to the CONSULTANT. Payment to the CONSULTANT by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition precedent to enforcing such Indemnified Party's rights to indemnification hereunder. In the event a final judgment, arbitration, award, order, settlement, or other final resolution expressly determines that the Claim did not arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONSULTANT, to any extent, then OC San will reimburse the CONSULTANT for the reasonable costs of defending the Indemnified Parties against such Claims. Additionally, in no event shall the cost to defend charged to CONSULTANT exceed CONSULTANT's proportionate percentage of fault.

The CONSULTANT's indemnification obligation hereunder shall survive the expiration or earlier termination of this Agreement until such time as action against the Indemnified Parties for such matter indemnified hereunder is fully and finally barred by the applicable statute of limitations.

SECTION 22. COMPLIANCE WITH OC SAN POLICIES AND PROCEDURES

The CONSULTANT shall be required to comply with all OC San policies and procedures. OC San requires the CONSULTANT and its Subconsultants/Subcontractors to follow and ensure their employees follow all applicable Federal, State, and local regulations as well as OC San's safety standards while working at OC San locations. The CONSULTANT and all of its employees and Subconsultants/Subcontractors shall adhere to all applicable Contractor Safety Standards attached hereto as Attachment "L".

SECTION 23. GOVERNING LAW

This Agreement shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in Orange County in the event any action is brought in connection with this Agreement or the performance thereof.

SECTION 24. TIME OF ESSENCE

Time is of the essence in the performance of this Agreement. CONSULTANT shall not be responsible for delays caused by circumstances beyond its reasonable control, including, but not limited to (1) strikes, lockouts, work slowdowns or stoppages or accidents, and (2) acts of God.

SECTION 25. CONFLICT OF INTEREST

The CONSULTANT covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of the services contemplated by this Agreement. No person having such interest shall be employed by or associated with the CONSULTANT.

SECTION 26. CONSULTANT'S OPINION OF COSTS

OC San acknowledges that construction estimates, financial analyses and feasibility projections are subject to many influences including, but not limited to, price of labor and materials, unknown or latent conditions of existing equipment or structures, and time or quality

of performance by third parties. OC San acknowledges that such influences may not be precisely forecasted and are beyond the control of CONSULTANT and that actual costs incurred may vary substantially from the estimates prepared by CONSULTANT. CONSULTANT does not warrant or guarantee the accuracy of construction or development cost estimates.

SECTION 27. ENTIRE AGREEMENT

This Agreement constitutes the entire understanding and agreement between the Parties and supersedes all previous negotiations between them pertaining to the subject matter hereof.

[THIS SECTION INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, this Agreement has been executed in the name of OC San and the CONSULTANT by their respective duly authorized officers, as of the date first written above.

BROWN AND CALDWELL

By _____ Date _____

Printed Name & Title

ORANGE COUNTY SANITATION DISTRICT

By _____ Date _____
Chad P. Wanke
Board Chairman

By _____ Date _____
Kelly A. Lore
Clerk of the Board

By _____ Date _____
Ruth Zintzun
Finance & Procurement Manager

Attachments: Attachment "A" Sample Scope of Work
Attachment "B" Not Used
Attachment "C" Not Used
Attachment "D" Allowable Direct Costs
Attachment "E" Rates Proposal
Attachment "F" Not Used
Attachment "G" Not Used
Attachment "H" Not Used
Attachment "I" Not Used
Attachment "J" Not Used
Attachment "K" Not Used
Attachment "L" Contractor Safety Standards
Attachment "M" Iran Contracting Act Verification

ATTACHMENT “A”

SAMPLE SCOPE OF WORK

ATTACHMENT "A"

SAMPLE SCOPE OF WORK DESCRIPTION

OC SAN staff will develop detailed scope of work to be included in each Request for Task Order Proposal (RFTOP). The RFTOP will require Consultants to base their proposals on the scope of work included in the RFTOP. The remainder of this document are the templates typically used for design projects. Notes to scope editor are shown, although they will be removed before a scope of work is included in a RFTOP. Yellow highlighted text indicates where project specific information or a hypothetical example is given.

Design Task Order

Attachment A - Scope of Work

1 PROJECT REQUIREMENTS

Provide professional design engineering services for the project described herein.

1.1 BACKGROUND

- A. The Secondary Clarifiers at Plant No. 1 were constructed under Project Nos. P1-16 (1973), P1-36-2 (1995), and P1-82 (2005). A buried ductile iron plant water line around the secondary clarifiers feeds the scum sprayers and hose bibs. Because the plant water chemical composition is so corrosive to ductile iron, many failures have occurred.

1.2 GENERAL PROJECT DESCRIPTION

- A. This project includes the replacement of approximately 1800 feet of existing 6-inch ductile iron buried plant water piping, valves, fittings, and connections.
- B. A location map is provided in **Figure 1**.

[insert location map]

Figure 1 - Project Location Map

1.3 PROJECT ELEMENTS

- A. **Element 1: Piping** – Replace the existing 1,800 feet of 6-inch buried ductile iron plant water piping with new 6-inch plant water piping.
- B. Assumptions for level of effort:
1. 1,600 feet of piping shall be below grade and 200 feet shall be either above or below grade.
 - a. 1,600 feet of piping is located around the Secondary Clarifiers. Assume high-density polyethylene (HDPE) as the pipe material with appropriate dimension ratio value.
 - b. 200 feet of piping will re-route the existing plant water line on the northwest end of the Secondary Clarifiers. Recent projects disconnected the existing plant water line at various locations resulting in an incomplete loop. This piping will reconnect the lines to allow for a complete loop. See Exhibit 13.1 for photos and Exhibit 13.3 for proposed routing design.
 - (1) For above grade pipe material, assume cement-lined ductile iron or fiberglass-reinforced plastic.
 2. Follow existing alignment with new pipe. New alignments shall be kept as close to the existing alignment as feasible.
 - a. The Secondary Effluent Junction Box No. 4 (SEJB-4), located at the southwest corner of the Secondary Clarifiers, is congested with various utilities, such as plant water, secondary effluent, and reclaimed water lines, and associated valves. Follow the existing alignment in this important area.
 - b. Concrete encasement of HDPE, located on the west side of the Secondary Clarifiers on Fuentes Road, was installed under project P1-102 (2006). Assume potholing is necessary to survey the edge of the concrete and confirm the limits of the existing concrete encasement

do not interfere with this project. As much as possible, the new alignment shall avoid the concrete encasement.

1.4 PROJECT SCHEDULE

- A. **Table 1** lists major project deliverables along with Orange County Sanitation District's (OC SAN) review and approval periods. CONSULTANT shall comply with the deadlines indicated in that table. OC SAN will consider an alternative CONSULTANT proposed schedule provided it is consistent with OC SAN resources, schedule constraints, and adds value. The negotiated durations will set the design baseline schedule.

Table 1 – Project Milestones and Deadlines

MILESTONE	DEADLINE
Kickoff Meeting	The kickoff meeting will be scheduled to coincide with the Project Notice to Proceed (NTP).
Preliminary Design Memo (PDM)	[XX] workdays from Preliminary Design Phase NTP.
OC SAN Review of PDM	10 workdays from receipt of PDM.
Submit Design Submittal 3 (DS3)	[YY] workdays from approval of PDM.
OC SAN Review of DS3	15 workdays from receipt of DS3.
Submit Final Design Submittal (FDS)	15 workdays from receipt of OC SAN comments on DS3.
OC SAN Review of FDS	10 workdays from receipt of FDS.
Submit Final Technical Plans and Specifications (FTPS)	15 workdays from receipt of OC SAN comments on FDS.
Total	[ZZZ] workdays

1.5 PROJECT MANAGEMENT

- A. CONSULTANT shall be responsible for managing CONSULTANT's project execution, schedule, budget, subconsultants, and coordination with other projects.
- B. Per **Exhibit 18**, PMWeb will be used for the management of this agreement.
- C. [Monthly Progress Report: Submit monthly progress reports at the same time as monthly invoices that include the following contents:
1. Work activities completed to date, in the current reporting period, and projected for the coming month.
 2. A brief description of outstanding issues and potential cost, schedule, quality impacts.
 3. Potential changes in the project scope or design scope.
 4. Any corrective actions needed to avoid potential impacts.
 5. Budget status: actual costs to date, costs to complete, and costs at completion.
 6. Schedule status: variances between scheduled and forecasted milestone dates.]
- D. Monthly Invoices: Provide a monthly cost report and/or invoices, which shall document the man-hours and billing rate for each person that works on the project, and shall include the following:
1. Budget
 2. Current billing period invoicing
 3. Previous billing period "total invoiced to date"
 4. Budget Amount Remaining
 5. Current billing period "total percent invoiced to date"

1.6 QUALITY CONTROL

- A. Provide Quality Assurance and Quality Control of the work.
- B. Provide documentation upon request that the CONSULTANT has performed a quality control review in-house, and all the comments have been addressed prior to providing any submittals to OC SAN.

1.7 PROJECT MEETINGS

- A. CONSULTANT shall communicate throughout the project to keep OC SAN apprised of the job, review work-in-progress, share information, discuss project submittals, present findings of technical analyses, receive and resolve comments, and obtain decisions and direction by OC SAN staff.
 - 1. **Table 2** below lists the anticipated meetings and site visits. Microsoft Teams shall be used for meetings. CONSULTANT will provide an agenda 2 workdays prior to each meeting. Meeting minutes will be submitted to the OC SAN project manager for review within 3 workdays of the meeting.

Table 2 – Project Assumed Meetings and Site Visits

DESIGN ACTIVITY	MEETINGS	SITE VISITS
Kickoff Meeting	1 (1-hour)	
PDM	Progress meeting (1-hour, every 2 weeks)	8 hours
PDM Workshop	2 (1-hour)	
DS3	Progress meeting (1-hour, every 2 weeks)	8 hours
DS3 Workshop	2 (1-hour)	
FDS	Progress meeting (1-hour, weekly)	
FDS Workshop	1 (1-hour)	
FTPS	Progress meeting (1-hour, weekly)	
Construction Services	6 hours	24 hours
Closeout	4 hours	12 hours

1.8 SUBMITTAL REVIEWS

- A. Deliverables (other than specifications) shall be submitted in searchable PDF format with no hard copy. Deliverables shall be bookmarked and hyperlinked for navigation per **Exhibit 14**.
- B. OC SAN has standardized on the use of Bluebeam Revu for reviewing and providing comments to PDF files. The purpose of the studio session is to provide review and collaboration. OC SAN staff will create the Bluebeam studio session, invite attendees, configure, and manage the studio session. Make drawing submittals in Bluebeam and respond to OC SAN comments in Bluebeam per **Exhibit 15**.

1.9 SPECIFICATIONS

- A. Prior to preparing or editing specifications, CONSULTANT shall meet with OC SAN staff to determine which OC SAN and CONSULTANT provided specifications should be included in the design. After discussions, all specifications should be loaded in Microsoft Teams (Teams) early in design and prior to editing for DS3.
- B. Tailor all specifications to project and remove requirements that do not apply.
- C. Unless a CONSULTANT is using their own specification management software, Specifications should remain in Teams for editing throughout design. Make all edits to specifications hosted in Teams. Unless agreed to, Specifications should not be removed from Teams or edited elsewhere.
- D. Provide specifications as Microsoft Word (Word) files with Track Changes enabled throughout design.

- E. OC SAN staff will review specifications during submittal review periods. CONSULTANT shall respond to OC SAN comments using Word “Reply” and “Resolve.” CONSULTANT shall “Reply” to each OC SAN comment describing how the comment will be addressed and revise the specification, as needed, to address the comment. “Resolve” will be used by the reviewer or designee to confirm their comment has been addressed. For more information see **Exhibit 16**.
- F. Prior to advertisement, all Word comments and revisions shall be Track Changes accepted, rejected, resolved, or deleted by OC SAN staff prior to bid.

2 PRELIMINARY DESIGN

All significant material and equipment decisions are to be made before the start of Design. At the end Preliminary Design, major design elements shall be fixed, and major equipment, footprints, and utility connection locations shall be well established. The extent of the design and the number and type of drawings shall also be established.

2.1 PRELIMINARY DESIGN AND PDM

- A. The PDM shall consist of a PowerPoint presentation. Present PDM findings and recommendations to OC SAN in a stakeholder meeting using the PowerPoint presentation mentioned in this section for consensus before the start of Design.
- B. Identify any equipment that has one competitive supplier (i.e., sole source). In those cases, recommend an appropriate procurement strategy compatible with California Law and OC SAN policies.
- C. Develop 2 conceptual design alternatives for the plant water piping alignment.
 - 1. Alternatives:
 - a. Reuse exiting alignment and existing points of connection
 - b. Alternate alignment along tunnels in and around secondary clarifiers
 - 2. Perform the following with each alternative:
 - a. Cost, benefit, and life cycle analysis.
 - b. Identify plant water construction shutdown requirements with estimated durations.
 - c. Identify construction access requirements and limitations.
 - d. Prepare preliminary drawings (sketches).
 - 3. Discuss the available alternatives with OC SAN. The PDM shall include the recommendation alternative.
- D. Prepare drawings showing:
 - 1. Proposed alignment of piping
 - 2. Proposed piping materials and quantities
 - 3. Proposed quantity and type of valves and valve cans
 - 4. Proposed connection points which include the following:
 - a. New replacement pipes connecting to existing main plant water line
 - b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
 - 5. Demolition of existing ductile iron pipes and valves
 - 6. Proposed design of new valves and valve cans
 - 7. Proposed design of connection points
 - a. New replacement pipes connecting to existing main plant water lines

- b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
- 8. Proposed design of pipe supports by typical detail and max spacing table
- E. Summarize key constructability and construction sequencing constraints.
 - 1. Develop process flow schematic of the components of the plant water system at Plant No. 1 that impact the pipelines being replaced.
- F. Prepare preliminary construction schedule.
- G. Prepare P&IDs: Fully detailed for each design "module", e.g., 1 pump set typical of all with proposed tagging strategy.
- H. Perform any potholing activities required for the concrete encasement survey specified under Element 1.
- I. Quantify soil contamination by determining the volume of excavation work needed to perform the Work. Coordinate with OC SAN ENGINEER to determine the area of excavation. Soil testing is not necessary.
- J. Develop testing requirements. Assume:
 - 1. Pressure leak and valve testing shall be included.
 - 2. Plant water operating pressure is 110 PSI.

2.2 PRELIMINARY DESIGN CONSTRUCTION COST ESTIMATE

- A. Prepare an AACE International Class 3 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01. Data used to prepare the cost estimate shall be included as an attachment to the PDM.
 - 1. Determine project specific and appropriate values to use for the percentages for profit, bond, and insurance.
 - 2. Costs for project level allowance, insurance, profit, and bond shall be cumulative and listed as individual line items.
 - 3. Allowances or mark ups should be well explained and itemized.
 - a. Include "Market Volatility" allowance of xx%.(revise based on the market conditions)
 - b. Do not setup allowance for change orders.
 - c. Do not escalate to midpoint of construction - this is by OC SAN.
 - 4. Specialty work should be recently (under 6 months) estimated by vendor.
 - a. For example, sewer bypassing services should be estimated by vendor (i.e., Rain 4 Rent).
 - b. Provide vendor quotes for high-cost equipment.
 - c. Minor equipment costs may be documented by written telephone quotations.
 - 5. Provide breakdown of lump sum costs.
 - 6. Show labor rates so they can be checked.
 - 7. Provide all back back up for all documentation obtained for the cost estimate purposes. The cost estimate back up shall have the date and the vendor name/contact name. If catalog price is used, provide the year of that publication.
- B. Prepare estimate of construction duration. The suggested construction duration shall take in considerations the verifiable lead time for all equipment.

3 DESIGN

Prepare biddable plans, technical specifications, other Bid Documents, and any associated design calculations, required to complete the Project Elements.

3.1 DS3 DELIVERABLES

- A. Meet at a 50% completion level with OC SAN staff to review design progress. Formal deliverables are not necessary. QA/QC is also not required for this preview.
- B. At this submittal, the design is essentially finished and submitted as complete. DS3 shall include all finished and checked plans and specifications. OC SAN staff will review DS3 and provide comments to the drawings and specifications. The CONSULTANT should be finished with no remaining design work except for OC SAN comments provided at DS3 review and their incorporation at FDS.
- C. [Prepare construction drawings in CAD conforming to OC SAN's CAD Manual. A CAD compliance check will be performed at DS3 (Exhibit 17, Chapter 8 explains the CAD compliance check, and Appendix D contains the "CAD Standards Compliance Checklist" summarizing all items checked by OC SAN). OC SAN will provide base layers and utilities for Work locations within the treatment plant boundaries.]

3.2 DS3 COST ESTIMATE

- A. Prepare an AACE International Class 2 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01 based on the DS3 design. Data used to prepare the cost estimate shall be included as an attachment to DS3.
- B. Prepare estimate of construction duration.

3.3 FDS DELIVERABLES

- A. Final Design Submittal (FDS) is for OC SAN to confirm all comments from DS3 have been addressed and incorporated and add any additional comments.

3.4 FTSP DOCUMENTS

- A. Final Technical Plans and Specifications is for the CONSULTANT to address and incorporate all comments and provide all necessary stamps and signatures for a complete bid package suitable for advertisement by OC SAN.

3.5 CONSTRUCTION COST ESTIMATE "ENGINEER'S ESTIMATE"

- A. 30 calendar days prior to advertisement, refresh the DS3 Class 2 cost estimate. Get updated vendor quotes used to prepare the DS3 cost estimate. This will become the Engineer's Estimate published in the front-end documents.

3.6 PERMITTING ASSISTANCE ([ALLOCATE 60 HOURS] [NOT INCLUDED IN THIS AGREEMENT])

- A. [For all applicable Project Elements of this Scope of Work, provide Bid Documents that ensure that the design complies with all conditions of existing permits and permits required to construct and implement this project. Testing, construction drawings, specifications, and supplemental drawings shall be prepared, as necessary, in the format required to obtain all permits.]
- B. Assist OC SAN in obtaining permits. This assistance shall include identifying applicable permits, completing required design, plan preparation, application forms provided by OC SAN, preparing supporting documentation for the permit applications as required by the issuing agency, furnishing the required number of copies of all construction drawings and exhibits, and attend meetings with permitting agencies at the request of OC SAN.
- C. Except for construction contractor-furnished permits, OC SAN staff will execute all applications. CONSULTANT shall determine the cost and requirements of all permits. All permit fees will be paid directly by OC SAN and will not be part of CONSULTANT's fee.
- D. Submit all supporting documentation in a timely fashion for all permits required for this project as described below.
 - 1. Caltrans Encroachment Permits

- a. Determine if encroachment permits or other types of permits are required by Caltrans for the design and construction phases. Provide the work necessary to obtain such permits including coordinating and attending meetings.

2. City/County Encroachment Permits

- a. Provide coordination, work effort, and attend meetings, as required, to obtain encroachment permits from each city and agency who has jurisdiction. Process the plans through the cities and agencies for approval, revise plans, and meet with them, as required, to obtain approval.]

3.7 BID SUPPORT SERVICES

- A. Provide answers to bidder's questions related to the design. Provide revisions to specifications and drawings when needed for addendum.
- B. Within 2 weeks of the bid opening date, prepare conformed document set (drawings, databases, specification, and other required materials) that incorporates the addenda. See requirements of OC SAN's CAD Manual.

3.8 POPULATE PMWEB LIST OF SUBMITTALS (ALLOCATE 24 HOURS)

- A. PMWeb is used to manage communication with the contractor. OC SAN uses an Excel template to populate the list of all submittals. The CONSULTANT shall review each project specification and complete the Submittal Items Template as follows:
 1. Enter the list of project specifications.
 2. Enter the list of commissioning packages. Commissioning packages are defined by Section 01810, Commissioning.
 3. Enter the following information for each submittal item.
 - a. Specification section: enter the specification section requiring the submittal.
 - b. Submittal Item description: enter the description of the submittal. Submittal items that refer to multiple specifications shall include referenced specification sections in brackets.
 - c. Comments: enter notes, comments, or clarifications. This field is optional.
 - d. Commissioning package: enter the commissioning package of the submittal item. Submittal items shall be duplicated when the same submittal is required for multiple commissioning packages. Items shall be separated into mobilization, general construction, or a commissioning package defined by the project specifications.
 - e. Phase: Identify which phase each submittal is required to be approved.
 - f. Retention: Specify if the submittal is a Project File or Facility Record based on OC SAN's Records Retention Policy.
 - g. Lead time: Specify the appropriate number of workdays that OC SAN has to review the particular submittal.
 - h. Load: Specify if the submittal should be loaded into PMWeb prior to NTP, upon contractor approval, or prior to the start of commissioning.
- B. OC SAN will provide a PMWeb Master Submittal Items template that includes the submittals required by OC SAN's Master Specifications. The CONSULTANT shall not deviate from the Master PMWeb Submittal Items, except as required by the project specific specifications. The CONSULTANT shall develop submittal items for specifications that are not part of OC SAN's Master Specifications.
- C. OC SAN will provide a 1-hour virtual training on the use of the PMWeb Master Submittal Items Template.
- D. The CONSULTANT shall populate, receive comments, address comments, and provide completed submittal form as follows:
 1. 20 workdays after advertisement date.

3.9 SAFETY AND RISK MEETING

- A. Ensure that an OC San Risk Management safety and security professional has been assigned to the project.
- B. CONSULTANT shall prepare and meet with OC San Risk Management personnel at all design stages to review Exhibit 11 Sample Full Project Safety Review Plan and Exhibit 12 Sample Risk Management Check List. This shall be completed in accordance with Exhibit 4 Risk Management Requirements.
- C. CONSULTANT shall update Exhibits 11 and 12 throughout the design phases. CONSULTANT shall provide OC San Risk Management with the final copies of Exhibit 11 and Exhibit 12 at completion of the Design Project.

4 CONSTRUCTION SERVICES

OC SAN will administer and provide field inspection for construction contracts. Construction and installation support services shall be provided by the CONSULTANT on an as-needed basis and as requested by OC SAN. The services are indicated below.

4.1 SUBMITTAL REVIEWS (ALLOCATE 15 HOURS)

- A. OC SAN will manage submittal review. The CONSULTANT shall use PMWeb to review and return comments to OC SAN. Return comments within 5 workdays.

4.2 REQUESTS FOR INFORMATION (RFIS) (ALLOCATE 15 HOURS)

- A. OC SAN will manage the processing of RFI's. When requested by OC SAN, CONSULTANT shall return written responses to OC SAN within 5 workdays of receipt of RFI using PMWeb. Generate necessary sketches, figures, and modifications to the drawings for clarifications.

4.3 PROGRESS MEETINGS AND SITE VISITS

- A. Refer to **Table 2**.

4.4 RECORD DRAWINGS

- A. Verify that the Contractor's As-Built set correctly reflects the information included in the approved shop drawings, RFIs, approved Field Change Orders, plan clarifications, plan changes, and other deviations from the conformed drawings, and that the information in the set is complete.
- B. Draft Record Drawings shall be submitted to OC SAN within 4 weeks of receipt from OC SAN of the approved Contractor's As-Built drawings. The Final Record Drawings shall be submitted within one week of receipt of OC SAN comments on the Draft Record Drawings.
- C. Prepare Draft Record Drawings based on the Final Field Markup Set for all drawings in accordance with the requirements in the CAD Manual. Submit the Draft Record Drawings to the OC SAN Resident Engineer. The Draft Record Drawings will be reviewed for content and CAD compliance by OC SAN staff. If no comments are identified, CONSULTANT shall prepare the Final Record Drawings and submit them along with the Contractor's field markup set to the Project Manager. For content and placement of record drawing stamp, see CAD Manual.
- D. Submit an electronic copy of the record drawings to OC SAN for review and approval. The acceptance of the record drawings shall be deemed a condition for completion of work.
- E. Contractor-generated drawings described in the Design Guidelines and the shop drawings will not be updated by CONSULTANT. The format and quantities for delivery of the submittals shall be listed below:

Contents	Draft Record Drawings	Final Record Drawings
All related electronic files, including CAD and compiled PDFs.	One copy to be uploaded to Microsoft Teams.	One copy to be uploaded to Microsoft Teams.

4.5 EQUIPMENT INFORMATION DATABASE (EID) (ALLOCATE [X] HOURS [NOT INCLUDED IN THIS AGREEMENT])

- A. OC SAN uses Maximo software to manage and track asset information. When new assets are added or existing assets are modified by a project, an EID Excel spreadsheet is used to populate or update Maximo asset information. CONSULTANT shall meet with OC SAN EIM staff to request an EID spreadsheet pre-populated with the new or modified assets. OC SAN staff will provide training on how to populate the EID spreadsheet. Field work will be needed to apply equipment tags and record equipment nameplate information and serial numbers to populate the EID. Coordinate with Maintenance Specialists (David Haug or designee, Div. 870) to walk new facilities to verify accuracy of P&IDs and EID.

4.6 [UPDATE BASELINE DRAWINGS]

5 STAFF ASSISTANCE

OC SAN staff member or designee assigned to work with CONSULTANT on the design of this project is Jessica Cheung. Phone (714) 593-7147, e-mail jcheung@ocsan.gov.

6 EXHIBITS

- A. Exhibits 1-3, 5-10 – Not Used
- B. Exhibit 4 – Risk Management Requirements
- C. Exhibit 11 – Sample Full Project Safety Review Plan
- D. Exhibit 12 – Sample Risk Management Checklist
- E. Exhibit 13 – Project Reference Material
 - a. 13.1 – Photos
 - b. 13.2 – Plant 1 Plant Water System Map
 - c. 13.3 – Proposed Design Idea (The CONSULTANT may start with this conceptual design.)
 - d. 13.4 – Proposed Valve Cans (The CONSULTANT may start with this conceptual design.)
 - e. 13.5 – Record Drawings (Available Upon Request)
 - (1) P1-82, Activated Sludge Plant Rehabilitation (2005)
 - (2) P1-36-2, Secondary Treatment Improvements at Plant No. 1 (1995)
 - (3) P1-16, 46 MGD Activated Sludge Plant at Reclamation Plant No. 1 (1973)
 - (4) P1-102, Secondary Activated Sludge Facility 2 at Plant No.1 (2006)
- F. Exhibit 14 – BlueBeam Designer Training for Submission
- G. Exhibit 15 – BlueBeam Designer User Training
- H. Exhibit 16 – Spec Review using Microsoft Word and Teams
- I. Exhibit 17 – [CAD Standard Manual](#)
- J. Exhibit 18 – PMWeb

JC:tk

PROFESSIONAL DESIGN SERVICES AGREEMENT

This PROFESSIONAL DESIGN SERVICES AGREEMENT (Agreement), to be effective this 1st day of July, 2024, is made and entered into by and between:

ORANGE COUNTY SANITATION DISTRICT
hereinafter referred to as "OC San"

AND

CIVILTEC ENGINEERING, INC.
hereinafter referred to as "CONSULTANT"

individually referred to as the "Party" and collectively as the "Parties".

RECITALS

WHEREAS, in accordance with Ordinance No. OC SAN-61 and pursuant to a Request for Qualifications ("Underlying RFQ"), the Board of Directors of OC San, by action on May 22, 2024, approved the award of the Agreement for **CONTRACT NO. FE24-00-04**, to CONSULTANT to provide services for selected projects on a task order (Task Order) basis from July 1, 2024 to June 30, 2027; and

WHEREAS, consistent with the Underlying RFQ, the CONSULTANT has been prequalified to perform services for the following project types: Project Type 1: Site Works, Building and Safety and Project Type 2: Linear and Collections; and

WHEREAS, for Task Orders estimated to cost \$100,000 or less, the Director of Engineering, with concurrence of the Purchasing Manager, may solicit a proposal from one (1) firm on the prequalified list, which will include the project types for which the consultants are prequalified; and

WHEREAS, the CONSULTANT is qualified to provide and has agreed to provide the necessary professional engineering and related services under this Agreement; and

WHEREAS, by this Agreement, the Parties intend to set forth the general terms and conditions that will apply to any specific project for which CONSULTANT is given a Task Order by OC San.

NOW, THEREFORE, OC San and the CONSULTANT mutually agree as follows:

SECTION 1. SCOPE OF AGREEMENT

OC San, at its sole discretion, may, from time to time during the term of this Agreement, issue a Request for Task Order Proposal ("RFTOP") setting forth the detailed requirements and scope of work to be performed on the identified project and thereafter, upon receipt of a proposal from the CONSULTANT, may issue a Task Order to proceed with the work. The scope of work will be in a form attached hereto as Attachment "A" – Sample Scope of Work.

Upon execution by OC San, the Task Order shall become an operative part of this Agreement. Should any conflict or inconsistency exist in the contract documents identified in this section, the conflict or inconsistency shall be resolved by applying the provisions in the highest priority document, which shall be determined in the following order of priority:

1. Agreement and any amendments thereto
2. the Task Order
3. the RFTOP

SECTION 2. TASK ORDER ISSUANCE BY OC SAN

The Task Order issued by OC San shall, specifically or by reference to the RFTOP and corresponding proposal, set forth the terms that will apply to the specific project for which the services will be rendered. Those terms shall include, but not be limited to, scope of work, time for performance, and compensation.

SECTION 3. TERM

This Agreement shall commence on the effective date of this Agreement and terminate on June 30, 2027, unless further extended by written agreement signed by the Parties. Any work that is required by a Task Order and is not finished by the date of termination shall be continued and completed by the CONSULTANT and the terms and conditions of this Agreement shall continue in effect for that time. OC San may, at its option, renew this Agreement for two (2) additional terms of one (1) year each, for a maximum contract duration of five (5) years.

SECTION 4. COMPENSATION

The total compensation payable to the CONSULTANT pursuant to this Agreement shall not exceed One Million Dollars (\$1,000,000) per year in accordance with the terms described in SECTION 3 - TERM. The compensation includes, but is not limited to, fees for professional engineering services based on the CONSULTANT's burdened labor rates, overhead, and profit, and fees from the CONSULTANT's subconsultants/subcontractors (Subconsultants/Subcontractors). The specific amount of compensation payable to the CONSULTANT for services rendered on an individual project, pursuant to a Task Order, shall be established for each Task Order and shall not exceed Five Hundred Thousand Dollars (\$500,000) per individual Task Order unless authorized by OC San's Board of Directors. The CONSULTANT agrees and acknowledges that the execution of this Agreement does not in any way guarantee that a Task Order will be issued to the CONSULTANT. Moreover, execution of this Agreement shall not entitle the CONSULTANT to any form of payment or compensation from OC San without OC San first having issued a written Task Order.

A. Total Compensation

Total compensation for any Task Order shall not exceed the amount indicated in the approved Task Order and any approved amendments thereto.

B. Labor

As a portion of the total compensation to be paid to CONSULTANT, OC San shall pay to CONSULTANT a sum equal to the burdened salaries (salaries plus benefits) actually paid

by CONSULTANT charged on an hourly-rate basis to the project and paid to CONSULTANT's personnel. For each Task Order, the cost of benefits for CONSULTANT shall be based on the fringe rates identified in Attachment "E" – Rates Proposal. Upon request of OC San, CONSULTANT shall provide OC San with certified payroll records of all employees' work that is charged to the project.

C. Overhead

As a portion of the total compensation to be paid to CONSULTANT, for each Task Order, OC San shall compensate CONSULTANT for overhead at the rates equal to the percentage of burdened labor as specified in Attachment "E" – Rates Proposal.

D. Profit

For each Task Order, profit shall be ten percent (10%) of burdened labor and overhead for all CONSULTANT fees and its Major Subconsultants (Architecture & Engineering [A&E] consulting services) whose fees for services are greater than or equal to \$100,000. Profit shall remain fixed through the term of this Agreement, inclusive of any renewals identified in Section 3 – TERM.

As a portion of the total compensation to be paid to CONSULTANT and its Major Subconsultants, OC San shall pay profit for all services rendered by CONSULTANT and its Major Subconsultants for the Task Order as specified in the previous paragraph.

E. Subconsultants

For each Task Order, any Minor Subconsultant (A&E consulting services) whose fees for services are less than \$100,000 and any Subconsultant/Subcontractor (non-A&E consulting services), CONSULTANT shall pay to Subconsultant/Subcontractor total compensation based on an established hourly rate schedule by personnel classification. The hourly rates shall cover burdened salary costs, overhead and profit. The compensation for each Minor Subconsultants and Subconsultants/Subcontractors (non-A&E consulting services), including both labor related fees, and direct costs shall not exceed the amount, as negotiated prior to award of a Task Order.

For each Task Order, any Major Subconsultant (A&E consulting services) whose fees for services are greater than or equal to \$100,000, total compensation for labor will be based on burdened labor rates, overhead, and profit, as negotiated prior to award of Task Order. Prior to award of Task Order, the CONSULTANT shall provide to OC San, if available, an audit performed for another public agency which documents the Major Subconsultant's labor burden rate and overhead rate. This audit shall be the most current available and have been conducted for a period that ended within twelve months of the task order proposal due date. This information shall be provided by CONSULTANT within ten (10) business days from request by OC San.

F. Direct Costs

OC San shall reimburse CONSULTANT and its Subconsultants/Subcontractors the actual costs of permits and associated fees, travel, licenses, and other services in an amount not to exceed the sums set forth in each approved Task Order. OC San shall also pay to CONSULTANT actual costs for equipment rentals, leases or purchases with prior written

approval of OC San. Upon request, CONSULTANT shall provide to OC San receipts and other documentary records to support CONSULTANT's request for reimbursement of these amounts, refer to Attachment "D" – Allowable Direct Costs. All incidental expenses shall be included in the overhead cost pursuant to this SECTION 4 – COMPENSATION.

G. Other Direct Costs

OC San will reimburse the CONSULTANT for Other Direct Costs incurred by CONSULTANT and its Subconsultants/Subcontractors due to modifications in the scope of work resulting from field investigations and field work required by the Task Order. These items may include special equipment, test equipment and tooling, and other materials and services not previously identified. Refer to Attachment "D" – Allowable Direct Costs for payment information.

H. Reimbursable Direct Costs

OC San will reimburse the CONSULTANT for reasonable travel and business expenses as described in this section and further described in Attachment "D" – Allowable Direct Costs. The reimbursement of the above-mentioned expenses will be based on an "accountable plan" as considered by the Internal Revenue Service (IRS). The plan includes a combination of reimbursements based upon receipts and a "per diem" component approved by the IRS. The most recent schedule of the per diem rates utilized by OC San may be found on the U.S. General Services Administration website at <https://www.gsa.gov/travel/plan-book/per-diem-rates>.

The CONSULTANT shall be responsible for the most economical and practical means of management of reimbursable costs inclusive, but not limited to, travel, lodging, and meals arrangements. OC San shall apply the most economic and practical method of reimbursement which may include reimbursements based upon receipts and/or "per diem" as deemed the most practical.

CONSULTANT shall be responsible for returning to OC San any excess reimbursements after the reimbursement has been paid by OC San.

Travel and travel arrangements – Any travel involving airfare, overnight stays, or multiple day attendance must be approved by OC San in advance.

Local travel is considered travel by the CONSULTANT within OC San general geographical area which includes Orange, Los Angeles, Ventura, San Bernardino, Riverside, San Diego, Imperial, and Kern Counties. Automobile mileage is reimbursable if CONSULTANT is required to utilize a personal vehicle for local travel.

Lodging – Overnight stays will not be approved by OC San for local travel. However, under certain circumstances overnight stay may be allowed at the discretion of OC San based on reasonableness of meeting schedules and the amount of time required for travel by the CONSULTANT. Such determination will be made on a case-by-case basis and at the discretion of OC San.

Travel Meals – Per diem rates as approved by the IRS shall be utilized for travel meals reimbursements. Per diem rates shall be applied to meals that are appropriate for travel times. Receipts are not required for the approved meals.

Additional details related to the reimbursement of the allowable direct costs are provided in Attachment "D" – Allowable Direct Costs.

I. Limitation of Costs

If, at any time, CONSULTANT estimates the cost of performing the services described in CONSULTANT's proposal will exceed seventy-five percent (75%) of the not to exceed amount of the Task Order, including any approved additional compensation, CONSULTANT shall notify OC San immediately, in writing. The written notice shall indicate the additional amount necessary to complete the services. Any cost incurred in excess of the approved not to exceed amount, without the express written consent of OC San's authorized representative, shall be at CONSULTANT's own risk. This written notice shall be provided separately from, and in addition to, any notification requirements contained in the CONSULTANT's invoice and monthly progress report. Failure to notify OC San that the services cannot be completed within the authorized not to exceed amount of a Task Order is a material breach of this Agreement.

J. Method of Payment:

The CONSULTANT shall submit for approval by OC San, monthly invoices based on the total services which have been satisfactorily completed and specifying a percentage of completion. The CONSULTANT's billings shall be certified for payment by OC San only after OC San has determined that the CONSULTANT has completed each applicable project task.

CONSULTANT shall submit separate invoices for each Task Order on a monthly basis.

CONSULTANT understands that submitted costs are subject to Section 11 - AUDIT PROVISIONS, below.

K. Task Order Completion

Upon satisfactory completion by CONSULTANT of the work called for under the terms of the Task Order and upon acceptance of such work by OC San, CONSULTANT will be paid the unpaid balance of any money due for such work.

Upon satisfactory completion of the work performed under each Task Order and prior to final payment under each Task Order for such work or prior settlement upon termination of this Agreement, and as a condition precedent thereto, CONSULTANT shall execute and deliver to OC San a release of all claims against OC San arising under or by virtue of this Agreement other than such claims, if any, as may be specifically exempted by CONSULTANT from the operation of the release in stated amounts to be set forth therein.

L. False Claims

Pursuant to the California False Claims Act (Government Code Sections 12650-12655), any CONSULTANT that knowingly submits a false claim to OC San for compensation under the terms of this Agreement may be held liable for treble damages and up to a Ten Thousand Dollars (\$10,000) civil penalty for each false claim submitted. This section shall also be binding on all Subconsultants/Subcontractors.

The CONSULTANT or its Subconsultants/Subcontractors shall be deemed to have submitted a false claim when the CONSULTANT or its Subconsultants/Subcontractors: (a) knowingly presents or causes to be presented to an officer or employee of OC San a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by OC San; (c) conspires to defraud OC San by getting a false claim allowed or paid by OC San; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to OC San; or (e) is a beneficiary of an inadvertent submission of a false claim to OC San and fails to disclose the false claim to OC San within a reasonable time after discovery of the false claim.

M. California Department of Industrial Relations (DIR) Registration and Record of Wages:

To the extent the CONSULTANT's employees and/or its Subconsultants/Subcontractors who will perform work during the design, preconstruction, and construction phases of a construction contract for which Prevailing Wage Determinations have been issued by the DIR and as more specifically defined under Labor Code Section 1720 et seq., CONSULTANT and its Subconsultants/Subcontractors shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4, the work is subject to compliance monitoring and enforcement by the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776 and shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Penalties for non-compliance with the requirements of Labor Code section 1776 may be deducted from progress payments per Labor Code section 1776.

Pursuant to Labor Code section 1776, the CONSULTANT and its Subconsultants/Subcontractors shall furnish a copy of all certified payroll records to OC San and/or general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 16461(e).

N. Record of Expenses:

The CONSULTANT shall keep complete and accurate records of all costs and expenses incidental to services covered by this Agreement. Such records will be made available to OC San upon request.

O. Reallocation of Total Compensation:

OC San, by its Director of Engineering, shall have the right to approve a reallocation of the incremental amounts constituting the total compensation payable under the Task Order, provided that the total compensation for the Task Order is not increased.

SECTION 5. LIMITATIONS UPON SUBCONTRACTING AND ASSIGNMENT

The CONSULTANT shall not contract with any other person or entity to perform the services required without the written approval of OC San. This Agreement may not be assigned voluntarily or by operation of law without the prior written approval of OC San. If the CONSULTANT is permitted to subcontract any part of this Agreement by OC San, the CONSULTANT shall be responsible to OC San for the acts and omissions of its Subconsultant/Subcontractor, as it is for persons directly employed by the CONSULTANT. Nothing contained in this Agreement shall create any contractual relationship between any Subconsultant/Subcontractor and OC San. All persons engaged in the work will be considered employees of the CONSULTANT. OC San will deal directly with and will make all payments to the CONSULTANT.

SECTION 6. CHANGES TO SCOPE OF WORK

In the event of a change in the scope of work as requested by OC San or any other changes to the Task Order, the Parties shall execute an amendment to the Task Order setting forth with particularity all new terms of the Task Order, including, but not limited to, any additional compensation.

SECTION 7. DOCUMENT OWNERSHIP – CONSULTANT PERFORMANCE

- A. All documents in all forms (electronic, paper, etc.), including, but not limited to, studies, sketches, drawings, computer printouts, disk files, and electronic copies prepared in connection with or related to the scope of work shall be the property of OC San. OC San's ownership of these documents includes use of, reproduction or reuse of, and all incidental rights, whether or not the work for which they were prepared has been performed. OC San's ownership entitlement arises upon payment or any partial payment for work performed and includes ownership of any and all work product completed prior to that payment. This section shall apply whether the CONSULTANT's services are satisfied by the completion of the Agreement or are terminated in accordance with other provisions of this Agreement. Notwithstanding any other provision of this section or Agreement, the CONSULTANT shall have the right to make copies of all such plans, studies, sketches, drawings, computer printouts and disk files, and specifications.
- B. CONSULTANT shall not be responsible for damage caused by subsequent changes to or uses of the deliverables where the subsequent changes or uses are not authorized or approved by CONSULTANT, provided that the service rendered by CONSULTANT was not a proximate cause of the damage.
- C. Copies of Work Product

Upon completion of the work required for each Task Order, the CONSULTANT shall deliver to OC San the number of copies specified in the specific Task Order scope of work of the final report containing the CONSULTANT's findings, conclusions, recommendations, and all supporting documentation and/or final design drawings and specifications. Each Task Order will define the requirements for the deliverables.

SECTION 8. INSURANCE

A. General:

- i. Insurance shall be issued and underwritten by insurance companies acceptable to OC San.
- ii. Insurers must have an "A-" Policyholder's Rating, or better, and Financial Rating of at least Class VIII, or better, in accordance with the most current A.M. Best's Guide Rating. However, OC San will accept State Compensation Insurance Fund for the required policy of Worker's Compensation Insurance subject to OC San's option to require a change in insurer in the event the State Fund financial rating is decreased below "B". Further, OC San will require CONSULTANT to substitute any insurer whose rating drops below the levels herein specified. Said substitution shall occur within twenty (20) days of written notice to CONSULTANT by OC San or its agent.
- iii. Coverage shall be in effect prior to the commencement of any work under this Agreement.

B. General Liability:

The CONSULTANT shall maintain during the life of this Agreement, including the period of warranty, Commercial General Liability Insurance written on an occurrence basis providing the following minimum limits of liability coverage: Two Million Dollars (\$2,000,000) per occurrence with Four Million Dollars (\$4,000,000) aggregate. If aggregate limits apply separately to this Agreement (as evidenced by submission of ISO form CG 25 03 or CG 25 04), then the aggregate limit may be equivalent to the per occurrence limit. Said insurance shall include coverage for the following hazards: Premises-Operations, blanket contractual liability (for this Agreement), products liability/completed operations (including any product manufactured or assembled), broad form property damage, blanket contractual liability, independent contractors liability, personal and advertising injury, mobile equipment, owners and contractors protective liability, and cross liability and severability of interest clauses. A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement(s). If requested by OC San and applicable, XCU coverage (Explosion, Collapse and Underground) and Riggers/On Hook Liability must be included in the General Liability policy and coverage must be reflected on the submitted Certificate of Insurance.

C. Umbrella Excess Liability:

The minimum limits of general liability and automobile liability insurance required, as set forth herein, shall be provided for through either a single policy of primary insurance or a combination of policies of primary and umbrella excess coverage. Umbrella excess liability coverage shall be issued with limits of liability which, when combined with the primary insurance, will equal the minimum limits for general liability and automobile liability.

D. Automobile/Vehicle Liability Insurance:

The CONSULTANT shall maintain a policy of automobile liability insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and

other vehicles providing the following minimum limit of liability coverage: combined single limit of One Million Dollars (\$1,000,000). A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement.

E. Drone Liability Insurance:

If a drone will be used, drone liability insurance must be maintained by the CONSULTANT in the amount of One Million Dollars (\$1,000,000) in a form acceptable to OC San.

F. Worker's Compensation Insurance:

The CONSULTANT shall provide such Workers' Compensation Insurance as required by the Labor Code of the State of California in the amount of the statutory limit, including Employer's Liability Insurance with a minimum limit of One Million Dollars (\$1,000,000) per occurrence. Such Worker's Compensation Insurance shall be endorsed to provide for a waiver of subrogation in favor of OC San. A statement on an insurance certificate will not be accepted in lieu of the actual endorsements unless the insurance carrier is the State of California Insurance Fund and the identifier "SCIF" and applicable endorsements are referenced on the certificate of insurance. If an exposure to Jones Act liability may exist, the insurance required herein shall include coverage for Jones Act claims.

G. Errors and Omissions/Professional Liability:

The CONSULTANT shall maintain in full force and effect, throughout the term of this Agreement, standard industry form professional liability/errors and omissions insurance coverage with coverage limits of not less than Two Million Dollars (\$2,000,000) in accordance with the provisions of this paragraph. If the policy of insurance is written on a "claims made" basis, said policy shall be continued in full force and effect at all times during the term of this Agreement and for a period of five (5) years from the date of the completion of the services hereunder.

In the event of termination of said policy during this period, the CONSULTANT shall obtain continuing insurance coverage for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement. Said coverage shall be evidenced by either a new policy evidencing no gap in coverage or by separate extended "tail" coverage with the present or new carrier.

In the event the present policy of insurance is written on an "occurrence" basis, said policy shall be continued in full force and effect during the term of this Agreement or until completion of the services provided for in this Agreement, whichever is later. In the event of termination of said policy during this period, new coverage shall be obtained for the required period to insure for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement.

The CONSULTANT shall provide to OC San a certificate of insurance in a form acceptable to OC San indicating the deductible or self-retention amounts and the expiration date of said policy and shall provide renewal certificates not less than ten (10) days prior to the expiration of each policy term.

H. Proof of Coverage:

The CONSULTANT shall furnish OC San with original certificates and amendatory endorsements effecting coverage. Said policies and endorsements shall conform to the requirements herein stated. All certificates and endorsements must be received and accepted by OC San before work commences. OC San reserves the right to require, at any time, complete, certified copies of all required insurance policies, including endorsements, effecting the coverage required. The following are approved forms that must be submitted as proof of coverage:

- | | |
|--|--|
| • Certificate of Insurance | ACORD Form 25 or other equivalent Certificate of Insurance form |
| • Additional Insurance (General Liability) | The combination of (ISO Forms) CG 2010 <u>and</u> CG 2037 |
| | All other additional insured endorsements must be submitted for approval by OC San and OC San may reject alternatives that provide different or less coverage to OC San. |
| • Additional Insured (Auto Liability) | Submit Endorsement provided by carrier for OC San's approval. |
| • Waiver of Subrogation | Submit workers' compensation waiver of subrogation endorsement provided by carrier for OC San's approval. |
| • Cancellation Notice | No endorsement is required. However, Vendor/Contractor is responsible for notifying OC San of any pending or actual insurance policy cancellation, as described in Article I. Cancellation and Policy Change Notice below. |

I. Cancellation and Policy Change Notice:

The CONSULTANT is required to notify OC San in writing of any insurance cancellation notice it receives or other knowledge of pending or actual insurance policy cancellation, within two (2) working days of receipt of such notice or acquisition of such knowledge. Additionally, the CONSULTANT is required to notify OC San in writing of any change in the terms of insurance, including reduction in coverage or increase in deductible/SIR, within two (2) working days of receipt of such notice or knowledge of same.

Said notices shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Contracts, Purchasing & Materials Management Division

J. Primary Insurance:

All liability policies shall contain a Primary and Non-Contributory Clause. Any other insurance maintained by OC San shall be excess and not contributing with the insurance provided by the CONSULTANT.

K. Separation of Insured:

All liability policies shall contain a "Separation of Insureds" clause.

L. Non-Limiting (if applicable):

Nothing in this document shall be construed as limiting in any way, nor shall it limit the indemnification provision contained in this Agreement or the extent to which the CONSULTANT may be held responsible for payment of damages to persons or property.

M. Deductibles and Self-Insured Retentions:

Any deductible and/or self-insured retention must be declared to OC San on the Certificate of Insurance. All deductibles and/or self-insured retentions require acceptance by OC San. At the option of OC San, either: a) the insurer shall reduce or eliminate such deductible or self-insured retention as respects OC San or b) the CONSULTANT shall provide a financial guarantee satisfactory to OC San guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

N. Defense Costs:

Liability policies shall have a provision that defense costs for all insureds and additional insureds are paid in addition to and do not deplete any policy limits.

O. Subconsultants/Subcontractors:

The CONSULTANT shall be responsible to establish insurance requirements for Subconsultants/Subcontractors hired by the CONSULTANT. The insurance shall be in amounts and types reasonably sufficient to deal with the risk of loss involving the Subconsultants'/Subcontractors' operations and work.

P. Limits Are Minimums:

If the CONSULTANT maintains higher limits than any minimums shown above, then OC San requires and shall be entitled to coverage for the higher limits maintained by the CONSULTANT.

SECTION 9. PROJECT TEAM AND SUBCONSULTANTS

CONSULTANT shall provide to OC San, prior to execution of a Task Order, the names and full descriptions of all Subconsultants/Subcontractors and CONSULTANT's project team members anticipated to be used in performing work under a Task Order. In its proposal, CONSULTANT shall include a description of the work and services to be performed by

each Subconsultant/Subcontractor and each of CONSULTANT's project team members. CONSULTANT shall include the respective compensation amounts for CONSULTANT and each Subconsultant/Subcontractor broken down as indicated in Section 4 – COMPENSATION, above.

There shall be no substitution of the listed Subconsultants/Subcontractors and CONSULTANT's project team members without prior written approval by OC San.

SECTION 10. ENGINEERING REGISTRATION

The CONSULTANT's personnel and its Subconsultants/Subcontractors shall be comprised of registered engineers and a staff of specialists and draftsmen in each department. The firm itself is not a registered engineer but represents and agrees that when the performance of this Agreement requires the services of a registered engineer, such services hereunder will be performed under the direct supervision of registered engineers who are registered in the State of California.

SECTION 11. AUDIT PROVISIONS

- A. OC San retains the reasonable right to access, review, examine, and audit any and all books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify that the CONSULTANT is in compliance with all the requirements under this Agreement. The CONSULTANT shall include OC San's right as described above in any and all of their subcontracts and shall ensure that these rights are binding upon all its Subconsultants/Subcontractors.
- B. OC San retains the right to examine CONSULTANT's books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify all direct and indirect costs, of whatever nature, which are claimed to have been incurred, or anticipated to be incurred, or to ensure CONSULTANT's compliance with all the requirements under this Agreement during the term of this Agreement and for a period of three (3) years after expiration or earlier termination of the Agreement.
- C. The CONSULTANT shall maintain complete and accurate records in accordance with generally accepted industry standard practices and OC San's policy. The CONSULTANT shall make available to OC San for review and audit all project-related accounting records and documents and any other financial data within fifteen (15) days after receipt of notice from OC San. Upon OC San's request, the CONSULTANT shall submit exact duplicates of originals of all requested records to OC San. If an audit is performed, the CONSULTANT shall ensure that a qualified employee of the CONSULTANT will be available to assist OC San's auditor in obtaining all project related accounting records and documents and any other financial data.

SECTION 12. LEGAL RELATIONSHIP BETWEEN PARTIES

The legal relationship between the Parties is that of an independent contractor and nothing herein shall be deemed to transform the CONSULTANT, its staff, independent contractors, or its Subconsultants/Subcontractors, into agents or employees of OC San and shall obtain no rights to any benefits which accrue to OC San's employees. CONSULTANT's staff performing services under the Agreement shall at all times be employees and/or independent contractors

of the CONSULTANT. The CONSULTANT shall monitor and control its staff and wages, salaries, and other amounts due directly to its staff in connection with the Agreement. The CONSULTANT shall be responsible for hiring, review, and termination of its staff and shall be accountable for all reports and obligations respecting them, such as social security, income tax withholding, unemployment compensation, workers' compensation insurance, and similar matters.

SECTION 13. NOTICES

All notices hereunder and communications regarding the interpretation of the terms of this Agreement, or changes thereto, shall be effected by delivery of said notices in person or by depositing said notices in the U.S. mail, registered or certified mail, return receipt requested, postage prepaid.

Notice shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue, Fountain Valley, CA 92708
Attention: Ludwig Lapus, Principal Contracts Administrator
Copy: Daniel Berokoff, Engineering Supervisor

Notice shall be mailed to CONSULTANT at:

Civiltec Engineering, Inc.
1440 N. Harbor Blvd., Suite 721
Fullerton, CA 92835
Attention: C. Shem Hawes

All communication regarding the Task Order will be addressed to the Project Manager. Direction from other OC San staff must be approved in writing by OC San's Project Manager prior to action from the CONSULTANT.

SECTION 14. TERMINATION

OC San may terminate this Agreement at any time, without cause, upon giving thirty (30) days written notice to the CONSULTANT. In the event of such termination, the CONSULTANT shall be entitled to compensation for work performed on a prorated basis through and including the effective date of termination.

The CONSULTANT shall be permitted to terminate this Agreement upon thirty (30) days written notice only if the CONSULTANT is not compensated for billed amounts in accordance with the provisions of this Agreement when the same are due. Notice of termination shall be mailed to OC San at the address listed in Section 13 – NOTICES, above.

SECTION 15. COMPLIANCE

The CONSULTANT certifies by the execution of this Agreement that it pays employees not less than the minimum wage as defined by law and that it does not discriminate in its employment with regard to race, color, religion, sex, or national origin; that it is in compliance with all Federal, State, and local directives and executive orders regarding non-discrimination in employment; and that it agrees to demonstrate positively and aggressively the principle of equal opportunity in employment.

The CONSULTANT shall comply with all applicable laws, ordinances, codes, and regulations of Federal, State, and local government in all aspects related to this Agreement and any work completed for OC San.

SECTION 16. AGREEMENT EXECUTION AUTHORIZATION

Both OC San and the CONSULTANT do covenant that each individual executing this document by and on behalf of each Party is a person duly authorized to execute this Agreement for that Party.

SECTION 17. DISPUTE RESOLUTION

In the event of a dispute arising between the Parties regarding performance or interpretation of this Agreement, the dispute shall be resolved by binding arbitration under the auspices of the Judicial Arbitration and Mediation Service ("JAMS"), or similar organization or entity conducting alternate dispute resolution services.

SECTION 18. ATTORNEY'S FEES, COSTS, AND NECESSARY DISBURSEMENTS

If any action at law or inequity or if any proceeding in the form of an Alternative Dispute Resolution is necessary to enforce or interpret the terms of this Agreement, the prevailing Party shall be entitled to reasonable attorney's fees, costs and necessary disbursements in addition to any other relief to which it may be entitled.

SECTION 19. WARRANTY

CONSULTANT shall perform its services in accordance with generally accepted industry and professional standards. If, within the 12-month period following completion of its services, OC San informs the CONSULTANT that any part of the services fails to meet those standards, the CONSULTANT shall, within the time prescribed by OC San, take all such actions as are necessary to correct or complete the noted deficiency(ies).

SECTION 20. INDEMNIFICATION

To the fullest extent permitted by law, the CONSULTANT shall indemnify, defend (at the CONSULTANT's sole cost and expense and with legal counsel approved by OC San, which approval shall not be unreasonably withheld), protect and hold harmless OC San and all of OC San's officers, directors, employees, consultants, and agents (collectively the "Indemnified Parties"), from and against any and all claims, damages, liabilities, causes of action, suits, arbitration awards, losses, judgments, fines, penalties, costs, and expenses (including, without limitation, attorneys' fees, disbursements and court costs, and all other professional, expert, or CONSULTANT's fees and costs, and OC San's general and administrative expenses) individually, a "Claim" and collectively, "Claims", which may arise from or are in any manner related, directly or indirectly, to any work performed or any operations, activities, or services provided by the CONSULTANT in carrying out its obligations under this Agreement to the extent of the negligent, recklessness, and/or willful misconduct of the CONSULTANT, its principals, officers, agents, employees, CONSULTANT's suppliers, Subconsultants, Subcontractors, and/or anyone employed directly or indirectly by any of them, regardless of any contributing negligence or strict

liability of an Indemnified Party. Notwithstanding the foregoing, nothing herein shall be construed to require the CONSULTANT to indemnify the Indemnified Parties from any Claim arising solely from:

- (A) the active negligence or willful misconduct of the Indemnified Parties; or
- (B) a natural disaster or other act of God, such as an earthquake; or
- (C) the independent action of a third party who is neither one of the Indemnified Parties nor the CONSULTANT, nor its principal, officer, agent, employee, nor the CONSULTANT's supplier, Subconsultant, Subcontractor, nor anyone employed directly or indirectly by any of them.

Exceptions (A) through (B) above shall not apply, and the CONSULTANT shall, to the fullest extent permitted by law, indemnify the Indemnified Parties from Claims arising from more than one cause if any such cause taken alone would otherwise result in the obligation to indemnify hereunder.

The CONSULTANT's liability for indemnification hereunder is in addition to any liability the CONSULTANT may have to OC San for a breach by the CONSULTANT of any of the provisions of this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit the CONSULTANT's indemnification obligation or other liability hereunder. The terms of this Agreement are contractual and the result of negotiation between the Parties. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code section 1654) that ambiguities are to be construed against the drafting Party shall not be employed in the interpretation of this Agreement.

SECTION 21. DUTY TO DEFEND

The duty to defend hereunder is wholly independent of and separate from the duty to indemnify and such duty to defend shall exist regardless of any ultimate liability of the CONSULTANT and shall be consistent with Civil Code section 2782.8. Such defense obligation shall arise immediately upon presentation of a Claim by any person if, without regard to the merit of the Claim, such Claim could potentially result in an obligation to indemnify one or more Indemnified Parties and upon written notice of such Claim being provided to the CONSULTANT. Payment to the CONSULTANT by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition precedent to enforcing such Indemnified Party's rights to indemnification hereunder. In the event a final judgment, arbitration, award, order, settlement, or other final resolution expressly determines that the Claim did not arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONSULTANT, to any extent, then OC San will reimburse the CONSULTANT for the reasonable costs of defending the Indemnified Parties against such Claims.

The CONSULTANT's indemnification obligation hereunder shall survive the expiration or earlier termination of this Agreement until such time as action against the Indemnified Parties for such matter indemnified hereunder is fully and finally barred by the applicable statute of limitations.

SECTION 22. COMPLIANCE WITH OC SAN POLICIES AND PROCEDURES

The CONSULTANT shall be required to comply with all OC San policies and procedures. OC San requires the CONSULTANT and its Subconsultants/Subcontractors to follow and ensure their employees follow all Federal, State, and local regulations as well as OC San's safety standards while working at OC San locations. If during the course of the contract it is discovered that OC San's safety standards do not comply with Federal, State, or local regulations, then the CONSULTANT is required to follow the most stringent regulatory requirement at no additional cost to OC San. The CONSULTANT and all of its employees and Subconsultants/Subcontractors shall adhere to all applicable Contractor Safety Standards attached hereto as Attachment "L".

SECTION 23. GOVERNING LAW

This Agreement shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in Orange County in the event any action is brought in connection with this Agreement or the performance thereof.

SECTION 24. TIME OF ESSENCE

Time is of the essence in the performance of this Agreement.

SECTION 25. CONFLICT OF INTEREST

The CONSULTANT covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of the services contemplated by this Agreement. No person having such interest shall be employed by or associated with the CONSULTANT.

SECTION 26. ENTIRE AGREEMENT

This Agreement constitutes the entire understanding and agreement between the Parties and supersedes all previous negotiations between them pertaining to the subject matter hereof.

[THIS SECTION INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, this Agreement has been executed in the name of OC San and the CONSULTANT by their respective duly authorized officers, as of the date first written above.

CIVILTEC ENGINEERING, INC.

By _____ Date _____

Printed Name & Title

ORANGE COUNTY SANITATION DISTRICT

By _____ Date _____
Chad P. Wanke
Board Chairman

By _____ Date _____
Kelly A. Lore
Clerk of the Board

By _____ Date _____
Ruth Zintzun
Finance & Procurement Manager

Attachments: Attachment "A" Sample Scope of Work
Attachment "B" Not Used
Attachment "C" Not Used
Attachment "D" Allowable Direct Costs
Attachment "E" Rates Proposal
Attachment "F" Not Used
Attachment "G" Not Used
Attachment "H" Not Used
Attachment "I" Not Used
Attachment "J" Not Used
Attachment "K" Not Used
Attachment "L" Contractor Safety Standards
Attachment "M" Iran Contracting Act Verification

ATTACHMENT “A”

SAMPLE SCOPE OF WORK

ATTACHMENT "A"

SAMPLE SCOPE OF WORK DESCRIPTION

OC SAN staff will develop detailed scope of work to be included in each Request for Task Order Proposal (RFTOP). The RFTOP will require Consultants to base their proposals on the scope of work included in the RFTOP. The remainder of this document are the templates typically used for design projects. Notes to scope editor are shown, although they will be removed before a scope of work is included in a RFTOP. Yellow highlighted text indicates where project specific information or a hypothetical example is given.

Design Task Order

Attachment A - Scope of Work

1 PROJECT REQUIREMENTS

Provide professional design engineering services for the project described herein.

1.1 BACKGROUND

- A. The Secondary Clarifiers at Plant No. 1 were constructed under Project Nos. P1-16 (1973), P1-36-2 (1995), and P1-82 (2005). A buried ductile iron plant water line around the secondary clarifiers feeds the scum sprayers and hose bibs. Because the plant water chemical composition is so corrosive to ductile iron, many failures have occurred.

1.2 GENERAL PROJECT DESCRIPTION

- A. This project includes the replacement of approximately 1800 feet of existing 6-inch ductile iron buried plant water piping, valves, fittings, and connections.
- B. A location map is provided in **Figure 1**.

[insert location map]

Figure 1 - Project Location Map

1.3 PROJECT ELEMENTS

- A. **Element 1: Piping** – Replace the existing 1,800 feet of 6-inch buried ductile iron plant water piping with new 6-inch plant water piping.
- B. Assumptions for level of effort:
 - 1. 1,600 feet of piping shall be below grade and 200 feet shall be either above or below grade.
 - a. 1,600 feet of piping is located around the Secondary Clarifiers. Assume high-density polyethylene (HDPE) as the pipe material with appropriate dimension ratio value.
 - b. 200 feet of piping will re-route the existing plant water line on the northwest end of the Secondary Clarifiers. Recent projects disconnected the existing plant water line at various locations resulting in an incomplete loop. This piping will reconnect the lines to allow for a complete loop. See Exhibit 13.1 for photos and Exhibit 13.3 for proposed routing design.
 - (1) For above grade pipe material, assume cement-lined ductile iron or fiberglass-reinforced plastic.
 - 2. Follow existing alignment with new pipe. New alignments shall be kept as close to the existing alignment as feasible.
 - a. The Secondary Effluent Junction Box No. 4 (SEJB-4), located at the southwest corner of the Secondary Clarifiers, is congested with various utilities, such as plant water, secondary effluent, and reclaimed water lines, and associated valves. Follow the existing alignment in this important area.
 - b. Concrete encasement of HDPE, located on the west side of the Secondary Clarifiers on Fuentes Road, was installed under project P1-102 (2006). Assume potholing is necessary to survey the edge of the concrete and confirm the limits of the existing concrete encasement

do not interfere with this project. As much as possible, the new alignment shall avoid the concrete encasement.

1.4 PROJECT SCHEDULE

- A. **Table 1** lists major project deliverables along with Orange County Sanitation District's (OC SAN) review and approval periods. CONSULTANT shall comply with the deadlines indicated in that table. OC SAN will consider an alternative CONSULTANT proposed schedule provided it is consistent with OC SAN resources, schedule constraints, and adds value. The negotiated durations will set the design baseline schedule.

Table 1 – Project Milestones and Deadlines

MILESTONE	DEADLINE
Kickoff Meeting	The kickoff meeting will be scheduled to coincide with the Project Notice to Proceed (NTP).
Preliminary Design Memo (PDM)	[XX] workdays from Preliminary Design Phase NTP.
OC SAN Review of PDM	10 workdays from receipt of PDM.
Submit Design Submittal 3 (DS3)	[YY] workdays from approval of PDM.
OC SAN Review of DS3	15 workdays from receipt of DS3.
Submit Final Design Submittal (FDS)	15 workdays from receipt of OC SAN comments on DS3.
OC SAN Review of FDS	10 workdays from receipt of FDS.
Submit Final Technical Plans and Specifications (FTPS)	15 workdays from receipt of OC SAN comments on FDS.
Total	[ZZZ] workdays

1.5 PROJECT MANAGEMENT

- A. CONSULTANT shall be responsible for managing CONSULTANT's project execution, schedule, budget, subconsultants, and coordination with other projects.
- B. Per **Exhibit 18**, PMWeb will be used for the management of this agreement.
- C. [Monthly Progress Report: Submit monthly progress reports at the same time as monthly invoices that include the following contents:
1. Work activities completed to date, in the current reporting period, and projected for the coming month.
 2. A brief description of outstanding issues and potential cost, schedule, quality impacts.
 3. Potential changes in the project scope or design scope.
 4. Any corrective actions needed to avoid potential impacts.
 5. Budget status: actual costs to date, costs to complete, and costs at completion.
 6. Schedule status: variances between scheduled and forecasted milestone dates.]
- D. Monthly Invoices: Provide a monthly cost report and/or invoices, which shall document the man-hours and billing rate for each person that works on the project, and shall include the following:
1. Budget
 2. Current billing period invoicing
 3. Previous billing period "total invoiced to date"
 4. Budget Amount Remaining
 5. Current billing period "total percent invoiced to date"

1.6 QUALITY CONTROL

- A. Provide Quality Assurance and Quality Control of the work.
- B. Provide documentation upon request that the CONSULTANT has performed a quality control review in-house, and all the comments have been addressed prior to providing any submittals to OC SAN.

1.7 PROJECT MEETINGS

- A. CONSULTANT shall communicate throughout the project to keep OC SAN apprised of the job, review work-in-progress, share information, discuss project submittals, present findings of technical analyses, receive and resolve comments, and obtain decisions and direction by OC SAN staff.
 - 1. **Table 2** below lists the anticipated meetings and site visits. Microsoft Teams shall be used for meetings. CONSULTANT will provide an agenda 2 workdays prior to each meeting. Meeting minutes will be submitted to the OC SAN project manager for review within 3 workdays of the meeting.

Table 2 – Project Assumed Meetings and Site Visits

DESIGN ACTIVITY	MEETINGS	SITE VISITS
Kickoff Meeting	1 (1-hour)	
PDM	Progress meeting (1-hour, every 2 weeks)	8 hours
PDM Workshop	2 (1-hour)	
DS3	Progress meeting (1-hour, every 2 weeks)	8 hours
DS3 Workshop	2 (1-hour)	
FDS	Progress meeting (1-hour, weekly)	
FDS Workshop	1 (1-hour)	
FTPS	Progress meeting (1-hour, weekly)	
Construction Services	6 hours	24 hours
Closeout	4 hours	12 hours

1.8 SUBMITTAL REVIEWS

- A. Deliverables (other than specifications) shall be submitted in searchable PDF format with no hard copy. Deliverables shall be bookmarked and hyperlinked for navigation per **Exhibit 14**.
- B. OC SAN has standardized on the use of Bluebeam Revu for reviewing and providing comments to PDF files. The purpose of the studio session is to provide review and collaboration. OC SAN staff will create the Bluebeam studio session, invite attendees, configure, and manage the studio session. Make drawing submittals in Bluebeam and respond to OC SAN comments in Bluebeam per **Exhibit 15**.

1.9 SPECIFICATIONS

- A. Prior to preparing or editing specifications, CONSULTANT shall meet with OC SAN staff to determine which OC SAN and CONSULTANT provided specifications should be included in the design. After discussions, all specifications should be loaded in Microsoft Teams (Teams) early in design and prior to editing for DS3.
- B. Tailor all specifications to project and remove requirements that do not apply.
- C. Unless a CONSULTANT is using their own specification management software, Specifications should remain in Teams for editing throughout design. Make all edits to specifications hosted in Teams. Unless agreed to, Specifications should not be removed from Teams or edited elsewhere.
- D. Provide specifications as Microsoft Word (Word) files with Track Changes enabled throughout design.

- E. OC SAN staff will review specifications during submittal review periods. CONSULTANT shall respond to OC SAN comments using Word “Reply” and “Resolve.” CONSULTANT shall “Reply” to each OC SAN comment describing how the comment will be addressed and revise the specification, as needed, to address the comment. “Resolve” will be used by the reviewer or designee to confirm their comment has been addressed. For more information see **Exhibit 16**.
- F. Prior to advertisement, all Word comments and revisions shall be Track Changes accepted, rejected, resolved, or deleted by OC SAN staff prior to bid.

2 PRELIMINARY DESIGN

All significant material and equipment decisions are to be made before the start of Design. At the end Preliminary Design, major design elements shall be fixed, and major equipment, footprints, and utility connection locations shall be well established. The extent of the design and the number and type of drawings shall also be established.

2.1 PRELIMINARY DESIGN AND PDM

- A. The PDM shall consist of a PowerPoint presentation. Present PDM findings and recommendations to OC SAN in a stakeholder meeting using the PowerPoint presentation mentioned in this section for consensus before the start of Design.
- B. Identify any equipment that has one competitive supplier (i.e., sole source). In those cases, recommend an appropriate procurement strategy compatible with California Law and OC SAN policies.
- C. Develop 2 conceptual design alternatives for the plant water piping alignment.
 - 1. Alternatives:
 - a. Reuse exiting alignment and existing points of connection
 - b. Alternate alignment along tunnels in and around secondary clarifiers
 - 2. Perform the following with each alternative:
 - a. Cost, benefit, and life cycle analysis.
 - b. Identify plant water construction shutdown requirements with estimated durations.
 - c. Identify construction access requirements and limitations.
 - d. Prepare preliminary drawings (sketches).
 - 3. Discuss the available alternatives with OC SAN. The PDM shall include the recommendation alternative.
- D. Prepare drawings showing:
 - 1. Proposed alignment of piping
 - 2. Proposed piping materials and quantities
 - 3. Proposed quantity and type of valves and valve cans
 - 4. Proposed connection points which include the following:
 - a. New replacement pipes connecting to existing main plant water line
 - b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
 - 5. Demolition of existing ductile iron pipes and valves
 - 6. Proposed design of new valves and valve cans
 - 7. Proposed design of connection points
 - a. New replacement pipes connecting to existing main plant water lines

- b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
- 8. Proposed design of pipe supports by typical detail and max spacing table
- E. Summarize key constructability and construction sequencing constraints.
 - 1. Develop process flow schematic of the components of the plant water system at Plant No. 1 that impact the pipelines being replaced.
- F. Prepare preliminary construction schedule.
- G. Prepare P&IDs: Fully detailed for each design "module", e.g., 1 pump set typical of all with proposed tagging strategy.
- H. Perform any potholing activities required for the concrete encasement survey specified under Element 1.
- I. Quantify soil contamination by determining the volume of excavation work needed to perform the Work. Coordinate with OC SAN ENGINEER to determine the area of excavation. Soil testing is not necessary.
- J. Develop testing requirements. Assume:
 - 1. Pressure leak and valve testing shall be included.
 - 2. Plant water operating pressure is 110 PSI.

2.2 PRELIMINARY DESIGN CONSTRUCTION COST ESTIMATE

- A. Prepare an AACE International Class 3 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01. Data used to prepare the cost estimate shall be included as an attachment to the PDM.
 - 1. Determine project specific and appropriate values to use for the percentages for profit, bond, and insurance.
 - 2. Costs for project level allowance, insurance, profit, and bond shall be cumulative and listed as individual line items.
 - 3. Allowances or mark ups should be well explained and itemized.
 - a. Include "Market Volatility" allowance of xx%.(revise based on the market conditions)
 - b. Do not setup allowance for change orders.
 - c. Do not escalate to midpoint of construction - this is by OC SAN.
 - 4. Specialty work should be recently (under 6 months) estimated by vendor.
 - a. For example, sewer bypassing services should be estimated by vendor (i.e., Rain 4 Rent).
 - b. Provide vendor quotes for high-cost equipment.
 - c. Minor equipment costs may be documented by written telephone quotations.
 - 5. Provide breakdown of lump sum costs.
 - 6. Show labor rates so they can be checked.
 - 7. Provide all back back up for all documentation obtained for the cost estimate purposes. The cost estimate back up shall have the date and the vendor name/contact name. If catalog price is used, provide the year of that publication.
- B. Prepare estimate of construction duration. The suggested construction duration shall take in considerations the verifiable lead time for all equipment.

3 DESIGN

Prepare biddable plans, technical specifications, other Bid Documents, and any associated design calculations, required to complete the Project Elements.

3.1 DS3 DELIVERABLES

- A. Meet at a 50% completion level with OC SAN staff to review design progress. Formal deliverables are not necessary. QA/QC is also not required for this preview.
- B. At this submittal, the design is essentially finished and submitted as complete. DS3 shall include all finished and checked plans and specifications. OC SAN staff will review DS3 and provide comments to the drawings and specifications. The CONSULTANT should be finished with no remaining design work except for OC SAN comments provided at DS3 review and their incorporation at FDS.
- C. [Prepare construction drawings in CAD conforming to OC SAN's CAD Manual. A CAD compliance check will be performed at DS3 (Exhibit 17, Chapter 8 explains the CAD compliance check, and Appendix D contains the "CAD Standards Compliance Checklist" summarizing all items checked by OC SAN). OC SAN will provide base layers and utilities for Work locations within the treatment plant boundaries.]

3.2 DS3 COST ESTIMATE

- A. Prepare an AACE International Class 2 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01 based on the DS3 design. Data used to prepare the cost estimate shall be included as an attachment to DS3.
- B. Prepare estimate of construction duration.

3.3 FDS DELIVERABLES

- A. Final Design Submittal (FDS) is for OC SAN to confirm all comments from DS3 have been addressed and incorporated and add any additional comments.

3.4 FTPS DOCUMENTS

- A. Final Technical Plans and Specifications is for the CONSULTANT to address and incorporate all comments and provide all necessary stamps and signatures for a complete bid package suitable for advertisement by OC SAN.

3.5 CONSTRUCTION COST ESTIMATE "ENGINEER'S ESTIMATE"

- A. 30 calendar days prior to advertisement, refresh the DS3 Class 2 cost estimate. Get updated vendor quotes used to prepare the DS3 cost estimate. This will become the Engineer's Estimate published in the front-end documents.

3.6 PERMITTING ASSISTANCE ([ALLOCATE 60 HOURS] [NOT INCLUDED IN THIS AGREEMENT])

- A. [For all applicable Project Elements of this Scope of Work, provide Bid Documents that ensure that the design complies with all conditions of existing permits and permits required to construct and implement this project. Testing, construction drawings, specifications, and supplemental drawings shall be prepared, as necessary, in the format required to obtain all permits.]
- B. Assist OC SAN in obtaining permits. This assistance shall include identifying applicable permits, completing required design, plan preparation, application forms provided by OC SAN, preparing supporting documentation for the permit applications as required by the issuing agency, furnishing the required number of copies of all construction drawings and exhibits, and attend meetings with permitting agencies at the request of OC SAN.
- C. Except for construction contractor-furnished permits, OC SAN staff will execute all applications. CONSULTANT shall determine the cost and requirements of all permits. All permit fees will be paid directly by OC SAN and will not be part of CONSULTANT's fee.
- D. Submit all supporting documentation in a timely fashion for all permits required for this project as described below.
 - 1. Caltrans Encroachment Permits

- a. Determine if encroachment permits or other types of permits are required by Caltrans for the design and construction phases. Provide the work necessary to obtain such permits including coordinating and attending meetings.

2. City/County Encroachment Permits

- a. Provide coordination, work effort, and attend meetings, as required, to obtain encroachment permits from each city and agency who has jurisdiction. Process the plans through the cities and agencies for approval, revise plans, and meet with them, as required, to obtain approval.]

3.7 BID SUPPORT SERVICES

- A. Provide answers to bidder's questions related to the design. Provide revisions to specifications and drawings when needed for addendum.
- B. Within 2 weeks of the bid opening date, prepare conformed document set (drawings, databases, specification, and other required materials) that incorporates the addenda. See requirements of OC SAN's CAD Manual.

3.8 POPULATE PMWEB LIST OF SUBMITTALS (ALLOCATE 24 HOURS)

- A. PMWeb is used to manage communication with the contractor. OC SAN uses an Excel template to populate the list of all submittals. The CONSULTANT shall review each project specification and complete the Submittal Items Template as follows:
 1. Enter the list of project specifications.
 2. Enter the list of commissioning packages. Commissioning packages are defined by Section 01810, Commissioning.
 3. Enter the following information for each submittal item.
 - a. Specification section: enter the specification section requiring the submittal.
 - b. Submittal Item description: enter the description of the submittal. Submittal items that refer to multiple specifications shall include referenced specification sections in brackets.
 - c. Comments: enter notes, comments, or clarifications. This field is optional.
 - d. Commissioning package: enter the commissioning package of the submittal item. Submittal items shall be duplicated when the same submittal is required for multiple commissioning packages. Items shall be separated into mobilization, general construction, or a commissioning package defined by the project specifications.
 - e. Phase: Identify which phase each submittal is required to be approved.
 - f. Retention: Specify if the submittal is a Project File or Facility Record based on OC SAN's Records Retention Policy.
 - g. Lead time: Specify the appropriate number of workdays that OC SAN has to review the particular submittal.
 - h. Load: Specify if the submittal should be loaded into PMWeb prior to NTP, upon contractor approval, or prior to the start of commissioning.
- B. OC SAN will provide a PMWeb Master Submittal Items template that includes the submittals required by OC SAN's Master Specifications. The CONSULTANT shall not deviate from the Master PMWeb Submittal Items, except as required by the project specific specifications. The CONSULTANT shall develop submittal items for specifications that are not part of OC SAN's Master Specifications.
- C. OC SAN will provide a 1-hour virtual training on the use of the PMWeb Master Submittal Items Template.
- D. The CONSULTANT shall populate, receive comments, address comments, and provide completed submittal form as follows:
 1. 20 workdays after advertisement date.

3.9 SAFETY AND RISK MEETING

- A. Ensure that an OC San Risk Management safety and security professional has been assigned to the project.
- B. CONSULTANT shall prepare and meet with OC San Risk Management personnel at all design stages to review Exhibit 11 Sample Full Project Safety Review Plan and Exhibit 12 Sample Risk Management Check List. This shall be completed in accordance with Exhibit 4 Risk Management Requirements.
- C. CONSULTANT shall update Exhibits 11 and 12 throughout the design phases. CONSULTANT shall provide OC San Risk Management with the final copies of Exhibit 11 and Exhibit 12 at completion of the Design Project.

4 CONSTRUCTION SERVICES

OC SAN will administer and provide field inspection for construction contracts. Construction and installation support services shall be provided by the CONSULTANT on an as-needed basis and as requested by OC SAN. The services are indicated below.

4.1 SUBMITTAL REVIEWS (ALLOCATE 15 HOURS)

- A. OC SAN will manage submittal review. The CONSULTANT shall use PMWeb to review and return comments to OC SAN. Return comments within 5 workdays.

4.2 REQUESTS FOR INFORMATION (RFIS) (ALLOCATE 15 HOURS)

- A. OC SAN will manage the processing of RFI's. When requested by OC SAN, CONSULTANT shall return written responses to OC SAN within 5 workdays of receipt of RFI using PMWeb. Generate necessary sketches, figures, and modifications to the drawings for clarifications.

4.3 PROGRESS MEETINGS AND SITE VISITS

- A. Refer to **Table 2**.

4.4 RECORD DRAWINGS

- A. Verify that the Contractor's As-Built set correctly reflects the information included in the approved shop drawings, RFIs, approved Field Change Orders, plan clarifications, plan changes, and other deviations from the conformed drawings, and that the information in the set is complete.
- B. Draft Record Drawings shall be submitted to OC SAN within 4 weeks of receipt from OC SAN of the approved Contractor's As-Built drawings. The Final Record Drawings shall be submitted within one week of receipt of OC SAN comments on the Draft Record Drawings.
- C. Prepare Draft Record Drawings based on the Final Field Markup Set for all drawings in accordance with the requirements in the CAD Manual. Submit the Draft Record Drawings to the OC SAN Resident Engineer. The Draft Record Drawings will be reviewed for content and CAD compliance by OC SAN staff. If no comments are identified, CONSULTANT shall prepare the Final Record Drawings and submit them along with the Contractor's field markup set to the Project Manager. For content and placement of record drawing stamp, see CAD Manual.
- D. Submit an electronic copy of the record drawings to OC SAN for review and approval. The acceptance of the record drawings shall be deemed a condition for completion of work.
- E. Contractor-generated drawings described in the Design Guidelines and the shop drawings will not be updated by CONSULTANT. The format and quantities for delivery of the submittals shall be listed below:

Contents	Draft Record Drawings	Final Record Drawings
All related electronic files, including CAD and compiled PDFs.	One copy to be uploaded to Microsoft Teams.	One copy to be uploaded to Microsoft Teams.

4.5 EQUIPMENT INFORMATION DATABASE (EID) (ALLOCATE [X] HOURS [NOT INCLUDED IN THIS AGREEMENT])

- A. OC SAN uses Maximo software to manage and track asset information. When new assets are added or existing assets are modified by a project, an EID Excel spreadsheet is used to populate or update Maximo asset information. CONSULTANT shall meet with OC SAN EIM staff to request an EID spreadsheet pre-populated with the new or modified assets. OC SAN staff will provide training on how to populate the EID spreadsheet. Field work will be needed to apply equipment tags and record equipment nameplate information and serial numbers to populate the EID. Coordinate with Maintenance Specialists (David Haug or designee, Div. 870) to walk new facilities to verify accuracy of P&IDs and EID.

4.6 [UPDATE BASELINE DRAWINGS]

5 STAFF ASSISTANCE

OC SAN staff member or designee assigned to work with CONSULTANT on the design of this project is Jessica Cheung. Phone (714) 593-7147, e-mail jcheung@ocsan.gov.

6 EXHIBITS

- A. Exhibits 1-3, 5-10 – Not Used
- B. Exhibit 4 – Risk Management Requirements
- C. Exhibit 11 – Sample Full Project Safety Review Plan
- D. Exhibit 12 – Sample Risk Management Checklist
- E. Exhibit 13 – Project Reference Material
 - a. 13.1 – Photos
 - b. 13.2 – Plant 1 Plant Water System Map
 - c. 13.3 – Proposed Design Idea (The CONSULTANT may start with this conceptual design.)
 - d. 13.4 – Proposed Valve Cans (The CONSULTANT may start with this conceptual design.)
 - e. 13.5 – Record Drawings (Available Upon Request)
 - (1) P1-82, Activated Sludge Plant Rehabilitation (2005)
 - (2) P1-36-2, Secondary Treatment Improvements at Plant No. 1 (1995)
 - (3) P1-16, 46 MGD Activated Sludge Plant at Reclamation Plant No. 1 (1973)
 - (4) P1-102, Secondary Activated Sludge Facility 2 at Plant No.1 (2006)
- F. Exhibit 14 – BlueBeam Designer Training for Submission
- G. Exhibit 15 – BlueBeam Designer User Training
- H. Exhibit 16 – Spec Review using Microsoft Word and Teams
- I. Exhibit 17 – [CAD Standard Manual](#)
- J. Exhibit 18 – PMWeb

JC:tk

PROFESSIONAL DESIGN SERVICES AGREEMENT

This PROFESSIONAL DESIGN SERVICES AGREEMENT (Agreement), to be effective this 1st day of July, 2024, is made and entered into by and between:

ORANGE COUNTY SANITATION DISTRICT
hereinafter referred to as "OC San"

AND

DUDEK
hereinafter referred to as "CONSULTANT"

individually referred to as the "Party" and collectively as the "Parties".

RECITALS

WHEREAS, in accordance with Ordinance No. OC SAN-61 and pursuant to a Request for Qualifications ("Underlying RFQ"), the Board of Directors of OC San, by action on May 22, 2024, approved the award of the Agreement for **CONTRACT NO. FE24-00-05**, to CONSULTANT to provide services for selected projects on a task order (Task Order) basis from July 1, 2024 to June 30, 2027; and

WHEREAS, consistent with the Underlying RFQ, the CONSULTANT has been prequalified to perform services for the following project types: Project Type 1: Site Works, Building and Safety, Project Type 2: Linear and Collections, and Project Type 3: Process, Electrical and Instrumentation & Control (I&C); and

WHEREAS, for Task Orders estimated to cost \$100,000 or less, the Director of Engineering, with concurrence of the Purchasing Manager, may solicit a proposal from one (1) firm on the prequalified list, which will include the project types for which the consultants are prequalified; and

WHEREAS, the CONSULTANT is qualified to provide and has agreed to provide the necessary professional engineering and related services under this Agreement; and

WHEREAS, by this Agreement, the Parties intend to set forth the general terms and conditions that will apply to any specific project for which CONSULTANT is given a Task Order by OC San.

NOW, THEREFORE, OC San and the CONSULTANT mutually agree as follows:

SECTION 1. SCOPE OF AGREEMENT

OC San, at its sole discretion, may, from time to time during the term of this Agreement, issue a Request for Task Order Proposal ("RFTOP") setting forth the detailed requirements and scope of work to be performed on the identified project and thereafter, upon receipt of a proposal from the CONSULTANT, may issue a Task Order to proceed with the work. The scope of work will be in a form attached hereto as Attachment "A" – Sample Scope of Work.

Upon execution by OC San, the Task Order shall become an operative part of this Agreement. Should any conflict or inconsistency exist in the contract documents identified in this section, the conflict or inconsistency shall be resolved by applying the provisions in the highest priority document, which shall be determined in the following order of priority:

1. Agreement and any amendments thereto
2. the Task Order
3. the RFTOP

SECTION 2. TASK ORDER ISSUANCE BY OC SAN

The Task Order issued by OC San shall, specifically or by reference to the RFTOP and corresponding proposal, set forth the terms that will apply to the specific project for which the services will be rendered. Those terms shall include, but not be limited to, scope of work, time for performance, and compensation.

SECTION 3. TERM

This Agreement shall commence on the effective date of this Agreement and terminate on June 30, 2027, unless further extended by written agreement signed by the Parties. Any work that is required by a Task Order and is not finished by the date of termination shall be continued and completed by the CONSULTANT and the terms and conditions of this Agreement shall continue in effect for that time. OC San may, at its option, renew this Agreement for two (2) additional terms of one (1) year each, for a maximum contract duration of five (5) years.

SECTION 4. COMPENSATION

The total compensation payable to the CONSULTANT pursuant to this Agreement shall not exceed One Million Dollars (\$1,000,000) per year in accordance with the terms described in SECTION 3 - TERM. The compensation includes, but is not limited to, fees for professional engineering services based on the CONSULTANT's burdened labor rates, overhead, and profit, and fees from the CONSULTANT's subconsultants/subcontractors (Subconsultants/Subcontractors). The specific amount of compensation payable to the CONSULTANT for services rendered on an individual project, pursuant to a Task Order, shall be established for each Task Order and shall not exceed Five Hundred Thousand Dollars (\$500,000) per individual Task Order unless authorized by OC San's Board of Directors. The CONSULTANT agrees and acknowledges that the execution of this Agreement does not in any way guarantee that a Task Order will be issued to the CONSULTANT. Moreover, execution of this Agreement shall not entitle the CONSULTANT to any form of payment or compensation from OC San without OC San first having issued a written Task Order.

A. Total Compensation

Total compensation for any Task Order shall not exceed the amount indicated in the approved Task Order and any approved amendments thereto.

B. Labor

As a portion of the total compensation to be paid to CONSULTANT, OC San shall pay to CONSULTANT a sum equal to the burdened salaries (salaries plus benefits) actually paid

by CONSULTANT charged on an hourly-rate basis to the project and paid to CONSULTANT's personnel. For each Task Order, the cost of benefits for CONSULTANT shall be based on the fringe rates identified in Attachment "E" – Rates Proposal. Upon request of OC San, CONSULTANT shall provide OC San with certified payroll records of all employees' work that is charged to the project.

C. Overhead

As a portion of the total compensation to be paid to CONSULTANT, for each Task Order, OC San shall compensate CONSULTANT for overhead at the rates equal to the percentage of burdened labor as specified in Attachment "E" – Rates Proposal.

D. Profit

For each Task Order, profit shall be ten percent (10%) of burdened labor and overhead for all CONSULTANT fees and its Major Subconsultants (Architecture & Engineering [A&E] consulting services) whose fees for services are greater than or equal to \$100,000. Profit shall remain fixed through the term of this Agreement, inclusive of any renewals identified in Section 3 – TERM.

As a portion of the total compensation to be paid to CONSULTANT and its Major Subconsultants, OC San shall pay profit for all services rendered by CONSULTANT and its Major Subconsultants for the Task Order as specified in the previous paragraph.

E. Subconsultants

For each Task Order, any Minor Subconsultant (A&E consulting services) whose fees for services are less than \$100,000 and any Subconsultant/Subcontractor (non-A&E consulting services), CONSULTANT shall pay to Subconsultant/Subcontractor total compensation based on an established hourly rate schedule by personnel classification. The hourly rates shall cover burdened salary costs, overhead and profit. The compensation for each Minor Subconsultants and Subconsultants/Subcontractors (non-A&E consulting services), including both labor related fees, and direct costs shall not exceed the amount, as negotiated prior to award of a Task Order.

For each Task Order, any Major Subconsultant (A&E consulting services) whose fees for services are greater than or equal to \$100,000, total compensation for labor will be based on burdened labor rates, overhead, and profit, as negotiated prior to award of Task Order. Prior to award of Task Order, the CONSULTANT shall provide to OC San, if available, an audit performed for another public agency which documents the Major Subconsultant's labor burden rate and overhead rate. This audit shall be the most current available and have been conducted for a period that ended within twelve months of the task order proposal due date. This information shall be provided by CONSULTANT within ten (10) business days from request by OC San.

F. Direct Costs

OC San shall reimburse CONSULTANT and its Subconsultants/Subcontractors the actual costs of permits and associated fees, travel, licenses, and other services in an amount not to exceed the sums set forth in each approved Task Order. OC San shall also pay to CONSULTANT actual costs for equipment rentals, leases or purchases with prior written

approval of OC San. Upon request, CONSULTANT shall provide to OC San receipts and other documentary records to support CONSULTANT's request for reimbursement of these amounts, refer to Attachment "D" – Allowable Direct Costs. All incidental expenses shall be included in the overhead cost pursuant to this SECTION 4 – COMPENSATION.

G. Other Direct Costs

OC San will reimburse the CONSULTANT for Other Direct Costs incurred by CONSULTANT and its Subconsultants/Subcontractors due to modifications in the scope of work resulting from field investigations and field work required by the Task Order. These items may include special equipment, test equipment and tooling, and other materials and services not previously identified. Refer to Attachment "D" – Allowable Direct Costs for payment information.

H. Reimbursable Direct Costs

OC San will reimburse the CONSULTANT for reasonable travel and business expenses as described in this section and further described in Attachment "D" – Allowable Direct Costs. The reimbursement of the above-mentioned expenses will be based on an "accountable plan" as considered by the Internal Revenue Service (IRS). The plan includes a combination of reimbursements based upon receipts and a "per diem" component approved by the IRS. The most recent schedule of the per diem rates utilized by OC San may be found on the U.S. General Services Administration website at <https://www.gsa.gov/travel/plan-book/per-diem-rates>.

The CONSULTANT shall be responsible for the most economical and practical means of management of reimbursable costs inclusive, but not limited to, travel, lodging, and meals arrangements. OC San shall apply the most economic and practical method of reimbursement which may include reimbursements based upon receipts and/or "per diem" as deemed the most practical.

CONSULTANT shall be responsible for returning to OC San any excess reimbursements after the reimbursement has been paid by OC San.

Travel and travel arrangements – Any travel involving airfare, overnight stays, or multiple day attendance must be approved by OC San in advance.

Local travel is considered travel by the CONSULTANT within OC San general geographical area which includes Orange, Los Angeles, Ventura, San Bernardino, Riverside, San Diego, Imperial, and Kern Counties. Automobile mileage is reimbursable if CONSULTANT is required to utilize a personal vehicle for local travel.

Lodging – Overnight stays will not be approved by OC San for local travel. However, under certain circumstances overnight stay may be allowed at the discretion of OC San based on reasonableness of meeting schedules and the amount of time required for travel by the CONSULTANT. Such determination will be made on a case-by-case basis and at the discretion of OC San.

Travel Meals – Per diem rates as approved by the IRS shall be utilized for travel meals reimbursements. Per diem rates shall be applied to meals that are appropriate for travel times. Receipts are not required for the approved meals.

Additional details related to the reimbursement of the allowable direct costs are provided in Attachment "D" – Allowable Direct Costs.

I. Limitation of Costs

If, at any time, CONSULTANT estimates the cost of performing the services described in CONSULTANT's proposal will exceed seventy-five percent (75%) of the not to exceed amount of the Task Order, including any approved additional compensation, CONSULTANT shall notify OC San immediately, in writing. The written notice shall indicate the additional amount necessary to complete the services. Any cost incurred in excess of the approved not to exceed amount, without the express written consent of OC San's authorized representative, shall be at CONSULTANT's own risk. This written notice shall be provided separately from, and in addition to, any notification requirements contained in the CONSULTANT's invoice and monthly progress report. Failure to notify OC San that the services cannot be completed within the authorized not to exceed amount of a Task Order is a material breach of this Agreement.

J. Method of Payment:

The CONSULTANT shall submit for approval by OC San, monthly invoices based on the total services which have been satisfactorily completed and specifying a percentage of completion. The CONSULTANT's billings shall be certified for payment by OC San only after OC San has determined that the CONSULTANT has completed each applicable project task.

CONSULTANT shall submit separate invoices for each Task Order on a monthly basis.

CONSULTANT understands that submitted costs are subject to Section 11 - AUDIT PROVISIONS, below.

K. Task Order Completion

Upon satisfactory completion by CONSULTANT of the work called for under the terms of the Task Order and upon acceptance of such work by OC San, CONSULTANT will be paid the unpaid balance of any money due for such work.

Upon satisfactory completion of the work performed under each Task Order and prior to final payment under each Task Order for such work or prior settlement upon termination of this Agreement, and as a condition precedent thereto, CONSULTANT shall execute and deliver to OC San a release of all claims against OC San arising under or by virtue of this Agreement other than such claims, if any, as may be specifically exempted by CONSULTANT from the operation of the release in stated amounts to be set forth therein.

L. False Claims

Pursuant to the California False Claims Act (Government Code Sections 12650-12655), any CONSULTANT that knowingly submits a false claim to OC San for compensation under the terms of this Agreement may be held liable for treble damages and up to a Ten Thousand Dollars (\$10,000) civil penalty for each false claim submitted. This section shall also be binding on all Subconsultants/Subcontractors.

The CONSULTANT or its Subconsultants/Subcontractors shall be deemed to have submitted a false claim when the CONSULTANT or its Subconsultants/Subcontractors: (a) knowingly presents or causes to be presented to an officer or employee of OC San a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by OC San; (c) conspires to defraud OC San by getting a false claim allowed or paid by OC San; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to OC San; or (e) is a beneficiary of an inadvertent submission of a false claim to OC San and fails to disclose the false claim to OC San within a reasonable time after discovery of the false claim.

M. California Department of Industrial Relations (DIR) Registration and Record of Wages:

To the extent the CONSULTANT's employees and/or its Subconsultants/Subcontractors who will perform work during the design, preconstruction, and construction phases of a construction contract for which Prevailing Wage Determinations have been issued by the DIR and as more specifically defined under Labor Code Section 1720 et seq., CONSULTANT and its Subconsultants/Subcontractors shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4, the work is subject to compliance monitoring and enforcement by the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776 and shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Penalties for non-compliance with the requirements of Labor Code section 1776 may be deducted from progress payments per Labor Code section 1776.

Pursuant to Labor Code section 1776, the CONSULTANT and its Subconsultants/Subcontractors shall furnish a copy of all certified payroll records to OC San and/or general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 16461(e).

N. Record of Expenses:

The CONSULTANT shall keep complete and accurate records of all costs and expenses incidental to services covered by this Agreement. Such records will be made available to OC San upon request.

O. Reallocation of Total Compensation:

OC San, by its Director of Engineering, shall have the right to approve a reallocation of the incremental amounts constituting the total compensation payable under the Task Order, provided that the total compensation for the Task Order is not increased.

SECTION 5. LIMITATIONS UPON SUBCONTRACTING AND ASSIGNMENT

The CONSULTANT shall not contract with any other person or entity to perform the services required without the written approval of OC San. This Agreement may not be assigned voluntarily or by operation of law without the prior written approval of OC San. If the CONSULTANT is permitted to subcontract any part of this Agreement by OC San, the CONSULTANT shall be responsible to OC San for the acts and omissions of its Subconsultant/Subcontractor, as it is for persons directly employed by the CONSULTANT. Nothing contained in this Agreement shall create any contractual relationship between any Subconsultant/Subcontractor and OC San. All persons engaged in the work will be considered employees of the CONSULTANT. OC San will deal directly with and will make all payments to the CONSULTANT.

SECTION 6. CHANGES TO SCOPE OF WORK

In the event of a change in the scope of work as requested by OC San or any other changes to the Task Order, the Parties shall execute an amendment to the Task Order setting forth with particularity all new terms of the Task Order, including, but not limited to, any additional compensation.

SECTION 7. DOCUMENT OWNERSHIP – CONSULTANT PERFORMANCE

- A. All documents in all forms (electronic, paper, etc.), including, but not limited to, studies, sketches, drawings, computer printouts, disk files, and electronic copies prepared in connection with or related to the scope of work shall be the property of OC San. OC San's ownership of these documents includes use of, reproduction or reuse of, and all incidental rights, whether or not the work for which they were prepared has been performed. OC San's ownership entitlement arises upon payment or any partial payment for work performed and includes ownership of any and all work product completed prior to that payment. This section shall apply whether the CONSULTANT's services are satisfied by the completion of the Agreement or are terminated in accordance with other provisions of this Agreement. Notwithstanding any other provision of this section or Agreement, the CONSULTANT shall have the right to make copies of all such plans, studies, sketches, drawings, computer printouts and disk files, and specifications.
- B. CONSULTANT shall not be responsible for damage caused by subsequent changes to or uses of the deliverables where the subsequent changes or uses are not authorized or approved by CONSULTANT, provided that the service rendered by CONSULTANT was not a proximate cause of the damage.
- C. Copies of Work Product

Upon completion of the work required for each Task Order, the CONSULTANT shall deliver to OC San the number of copies specified in the specific Task Order scope of work of the final report containing the CONSULTANT's findings, conclusions, recommendations, and all supporting documentation and/or final design drawings and specifications. Each Task Order will define the requirements for the deliverables.

SECTION 8. INSURANCE

A. General:

- i. Insurance shall be issued and underwritten by insurance companies acceptable to OC San.
- ii. Insurers must have an "A-" Policyholder's Rating, or better, and Financial Rating of at least Class VIII, or better, in accordance with the most current A.M. Best's Guide Rating. However, OC San will accept State Compensation Insurance Fund for the required policy of Worker's Compensation Insurance subject to OC San's option to require a change in insurer in the event the State Fund financial rating is decreased below "B". Further, OC San will require CONSULTANT to substitute any insurer whose rating drops below the levels herein specified. Said substitution shall occur within twenty (20) days of written notice to CONSULTANT by OC San or its agent.
- iii. Coverage shall be in effect prior to the commencement of any work under this Agreement.

B. General Liability:

The CONSULTANT shall maintain during the life of this Agreement, including the period of warranty, Commercial General Liability Insurance written on an occurrence basis providing the following minimum limits of liability coverage: Two Million Dollars (\$2,000,000) per occurrence with Four Million Dollars (\$4,000,000) aggregate. If aggregate limits apply separately to this Agreement (as evidenced by submission of ISO form CG 25 03 or CG 25 04), then the aggregate limit may be equivalent to the per occurrence limit. Said insurance shall include coverage for the following hazards: Premises-Operations, blanket contractual liability (for this Agreement), products liability/completed operations (including any product manufactured or assembled), broad form property damage, blanket contractual liability, independent contractors liability, personal and advertising injury, mobile equipment, owners and contractors protective liability, and cross liability and severability of interest clauses. A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement(s). If requested by OC San and applicable, XCU coverage (Explosion, Collapse and Underground) and Riggers/On Hook Liability must be included in the General Liability policy and coverage must be reflected on the submitted Certificate of Insurance.

C. Umbrella Excess Liability:

The minimum limits of general liability and automobile liability insurance required, as set forth herein, shall be provided for through either a single policy of primary insurance or a combination of policies of primary and umbrella excess coverage. Umbrella excess liability coverage shall be issued with limits of liability which, when combined with the primary insurance, will equal the minimum limits for general liability and automobile liability.

D. Automobile/Vehicle Liability Insurance:

The CONSULTANT shall maintain a policy of automobile liability insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and other vehicles providing the following minimum limit of liability coverage: combined single limit of One Million Dollars (\$1,000,000). A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement.

E. Drone Liability Insurance:

If a drone will be used, drone liability insurance must be maintained by the CONSULTANT in the amount of One Million Dollars (\$1,000,000) in a form acceptable to OC San.

F. Worker's Compensation Insurance:

The CONSULTANT shall provide such Workers' Compensation Insurance as required by the Labor Code of the State of California in the amount of the statutory limit, including Employer's Liability Insurance with a minimum limit of One Million Dollars (\$1,000,000) per occurrence. Such Worker's Compensation Insurance shall be endorsed to provide for a waiver of subrogation in favor of OC San. A statement on an insurance certificate will not be accepted in lieu of the actual endorsements unless the insurance carrier is the State of California Insurance Fund and the identifier "SCIF" and applicable endorsements are referenced on the certificate of insurance. If an exposure to Jones Act liability may exist, the insurance required herein shall include coverage for Jones Act claims.

G. Errors and Omissions/Professional Liability:

The CONSULTANT shall maintain in full force and effect, throughout the term of this Agreement, standard industry form professional liability/errors and omissions insurance coverage with coverage limits of not less than Two Million Dollars (\$2,000,000) in accordance with the provisions of this paragraph. If the policy of insurance is written on a "claims made" basis, said policy shall be continued in full force and effect at all times during the term of this Agreement and for a period of five (5) years from the date of the completion of the services hereunder.

In the event of termination of said policy during this period, the CONSULTANT shall obtain continuing insurance coverage for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement. Said coverage shall be evidenced by either a new policy evidencing no gap in coverage or by separate extended "tail" coverage with the present or new carrier.

In the event the present policy of insurance is written on an "occurrence" basis, said policy shall be continued in full force and effect during the term of this Agreement or until completion of the services provided for in this Agreement, whichever is later. In the event of termination of said policy during this period, new coverage shall be obtained for the required period to insure for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement.

The CONSULTANT shall provide to OC San a certificate of insurance in a form acceptable to OC San indicating the deductible or self-retention amounts and the expiration date of said policy and shall provide renewal certificates not less than ten (10) days prior to the expiration of each policy term.

H. Proof of Coverage:

The CONSULTANT shall furnish OC San with original certificates and amendatory endorsements effecting coverage. Said policies and endorsements shall conform to the requirements herein stated. All certificates and endorsements must be received and accepted by OC San before work commences. OC San reserves the right to require, at any time, complete, certified copies of all required insurance policies, including endorsements, effecting the coverage required. The following are approved forms that must be submitted as proof of coverage:

- | | |
|--|--|
| • Certificate of Insurance | ACORD Form 25 or other equivalent Certificate of Insurance form |
| • Additional Insurance (General Liability) | The combination of (ISO Forms) CG 2010 <u>and</u> CG 2037 |
| | All other additional insured endorsements must be submitted for approval by OC San and OC San may reject alternatives that provide different or less coverage to OC San. |
| • Additional Insured (Auto Liability) | Submit Endorsement provided by carrier for OC San's approval. |
| • Waiver of Subrogation | Submit workers' compensation waiver of subrogation endorsement provided by carrier for OC San's approval. |
| • Cancellation Notice | No endorsement is required. However, Vendor/Contractor is responsible for notifying OC San of any pending or actual insurance policy cancellation, as described in Article I. Cancellation and Policy Change Notice below. |

I. Cancellation and Policy Change Notice:

The CONSULTANT is required to notify OC San in writing of any insurance cancellation notice it receives or other knowledge of pending or actual insurance policy cancellation, within two (2) working days of receipt of such notice or acquisition of such knowledge. Additionally, the CONSULTANT is required to notify OC San in writing of any change in the terms of insurance, including reduction in coverage or increase in deductible/SIR, within two (2) working days of receipt of such notice or knowledge of same.

Said notices shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue, Fountain Valley, CA 92708
Attention: Contracts, Purchasing & Materials Management Division

J. Primary Insurance:

All liability policies shall contain a Primary and Non-Contributory Clause. Any other insurance maintained by OC San shall be excess and not contributing with the insurance provided by the CONSULTANT.

K. Separation of Insured:

All liability policies shall contain a "Separation of Insureds" clause.

L. Non-Limiting (if applicable):

Nothing in this document shall be construed as limiting in any way, nor shall it limit the indemnification provision contained in this Agreement or the extent to which the CONSULTANT may be held responsible for payment of damages to persons or property.

M. Deductibles and Self-Insured Retentions:

Any deductible and/or self-insured retention must be declared to OC San on the Certificate of Insurance. All deductibles and/or self-insured retentions require acceptance by OC San. At the option of OC San, either: a) the insurer shall reduce or eliminate such deductible or self-insured retention as respects OC San or b) the CONSULTANT shall provide a financial guarantee satisfactory to OC San guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

N. Defense Costs:

Liability policies (excluding the Errors & Omissions/Professional Liability Policy) shall have a provision that defense costs for all insureds and additional insureds are paid in addition to and do not deplete any policy limits.

O. Subconsultants/Subcontractors:

The CONSULTANT shall be responsible to establish insurance requirements for Subconsultants/Subcontractors hired by the CONSULTANT. The insurance shall be in amounts and types reasonably sufficient to deal with the risk of loss involving the Subconsultants'/Subcontractors' operations and work.

P. Limits Are Minimums:

If the CONSULTANT maintains higher limits than any minimums shown above, then OC San requires and shall be entitled to coverage for the higher limits maintained by the CONSULTANT.

SECTION 9. PROJECT TEAM AND SUBCONSULTANTS

CONSULTANT shall provide to OC San, prior to execution of a Task Order, the names and full descriptions of all Subconsultants/Subcontractors and CONSULTANT's project team members anticipated to be used in performing work under a Task Order. In its proposal, CONSULTANT shall include a description of the work and services to be performed by each Subconsultant/Subcontractor and each of CONSULTANT's project team members. CONSULTANT shall include the respective compensation amounts for CONSULTANT and each Subconsultant/Subcontractor broken down as indicated in Section 4 – COMPENSATION, above.

There shall be no substitution of the listed Subconsultants/Subcontractors and CONSULTANT's project team members without prior written approval by OC San.

SECTION 10. ENGINEERING REGISTRATION

The CONSULTANT's personnel and its Subconsultants/Subcontractors shall be comprised of registered engineers and a staff of specialists and draftsmen in each department. The firm itself is not a registered engineer but represents and agrees that when the performance of this Agreement requires the services of a registered engineer, such services hereunder will be performed under the direct supervision of registered engineers who are registered in the State of California.

SECTION 11. AUDIT PROVISIONS

- A. OC San retains the reasonable right to access, review, examine, and audit any and all books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify that the CONSULTANT is in compliance with all the requirements under this Agreement. The CONSULTANT shall include OC San's right as described above in any and all of their subcontracts and shall ensure that these rights are binding upon all its Subconsultants/Subcontractors.
- B. OC San retains the right to examine CONSULTANT's books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify all direct and indirect costs, of whatever nature, which are claimed to have been incurred, or anticipated to be incurred, or to ensure CONSULTANT's compliance with all the requirements under this Agreement during the term of this Agreement and for a period of three (3) years after expiration or earlier termination of the Agreement.
- C. The CONSULTANT shall maintain complete and accurate records in accordance with generally accepted industry standard practices and OC San's policy. The CONSULTANT shall make available to OC San for review and audit all project-related accounting records and documents and any other financial data within fifteen (15) days after receipt of notice from OC San. Upon OC San's request, the CONSULTANT shall submit exact duplicates of originals of all requested records to OC San. If an audit is performed, the CONSULTANT shall ensure that a qualified employee of the CONSULTANT will be available to assist OC San's auditor in obtaining all project related accounting records and documents and any other financial data.

SECTION 12. LEGAL RELATIONSHIP BETWEEN PARTIES

The legal relationship between the Parties is that of an independent contractor and nothing herein shall be deemed to transform the CONSULTANT, its staff, independent contractors, or its Subconsultants/Subcontractors, into agents or employees of OC San and shall obtain no rights to any benefits which accrue to OC San's employees. CONSULTANT's staff performing services under the Agreement shall at all times be employees and/or independent contractors of the CONSULTANT. The CONSULTANT shall monitor and control its staff and wages, salaries, and other amounts due directly to its staff in connection with the Agreement. The CONSULTANT shall be responsible for hiring, review, and termination of its staff and shall be accountable for all reports and obligations respecting them, such as social security, income tax withholding, unemployment compensation, workers' compensation insurance, and similar matters.

SECTION 13. NOTICES

All notices hereunder and communications regarding the interpretation of the terms of this Agreement, or changes thereto, shall be effected by delivery of said notices in person or by depositing said notices in the U.S. mail, registered or certified mail, return receipt requested, postage prepaid.

Notice shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Ludwig Lapus, Principal Contracts Administrator
Copy: Daniel Berokoff, Engineering Supervisor

Notice shall be mailed to CONSULTANT at:

Dudek
605 Third Street
Encinitas, CA 92024
Attention: Russ Bergholz

All communication regarding the Task Order will be addressed to the Project Manager. Direction from other OC San staff must be approved in writing by OC San's Project Manager prior to action from the CONSULTANT.

SECTION 14. TERMINATION

OC San may terminate this Agreement at any time, without cause, upon giving thirty (30) days written notice to the CONSULTANT. In the event of such termination, the CONSULTANT shall be entitled to compensation for work performed on a prorated basis through and including the effective date of termination.

The CONSULTANT shall be permitted to terminate this Agreement upon thirty (30) days written notice only if the CONSULTANT is not compensated for billed amounts in accordance with the provisions of this Agreement when the same are due. Notice of termination shall be mailed to OC San at the address listed in Section 13 – NOTICES, above.

SECTION 15. COMPLIANCE

The CONSULTANT certifies by the execution of this Agreement that it pays employees not less than the minimum wage as defined by law and that it does not discriminate in its employment with regard to race, color, religion, sex, or national origin; that it is in compliance with all Federal, State, and local directives and executive orders regarding non-discrimination in employment; and that it agrees to demonstrate positively and aggressively the principle of equal opportunity in employment.

The CONSULTANT shall comply with all applicable laws, ordinances, codes, and regulations of Federal, State, and local government in all aspects related to this Agreement and any work completed for OC San.

SECTION 16. AGREEMENT EXECUTION AUTHORIZATION

Both OC San and the CONSULTANT do covenant that each individual executing this document by and on behalf of each Party is a person duly authorized to execute this Agreement for that Party.

SECTION 17. DISPUTE RESOLUTION

In the event of a dispute arising between the Parties regarding performance or interpretation of this Agreement, the dispute shall be resolved by binding arbitration under the auspices of the Judicial Arbitration and Mediation Service ("JAMS"), or similar organization or entity conducting alternate dispute resolution services.

SECTION 18. ATTORNEY'S FEES, COSTS, AND NECESSARY DISBURSEMENTS

If any action at law or inequity or if any proceeding in the form of an Alternative Dispute Resolution is necessary to enforce or interpret the terms of this Agreement, the prevailing Party shall be entitled to reasonable attorney's fees, costs and necessary disbursements in addition to any other relief to which it may be entitled.

SECTION 19. WARRANTY

CONSULTANT shall perform its services in accordance with generally accepted industry and professional standards. If, within the 12-month period following completion of its services, OC San informs the CONSULTANT that any part of the services fails to meet those standards, the CONSULTANT shall, within the time prescribed by OC San, take all such actions as are necessary to correct or complete the noted deficiency(ies).

SECTION 20. INDEMNIFICATION

To the fullest extent permitted by law, the CONSULTANT shall indemnify, defend (at the CONSULTANT's sole cost and expense and with legal counsel approved by OC San, which approval shall not be unreasonably withheld), protect and hold harmless OC San and all of OC San's officers, directors, employees, consultants, and agents (collectively the "Indemnified Parties"), from and against any and all claims, damages, liabilities, causes of action, suits, arbitration awards, losses, judgments, fines, penalties, costs, and expenses (including, without limitation, attorneys' fees, disbursements and court costs, and all other

professional, expert, or CONSULTANT's fees and costs, and OC San's general and administrative expenses) individually, a "Claim" and collectively, "Claims", which may arise from or are in any manner related, directly or indirectly, to any work performed or any operations, activities, or services provided by the CONSULTANT in carrying out its obligations under this Agreement to the extent of the negligent, recklessness, and/or willful misconduct of the CONSULTANT, its principals, officers, agents, employees, CONSULTANT's suppliers, Subconsultants, Subcontractors, and/or anyone employed directly or indirectly by any of them, regardless of any contributing negligence or strict liability of an Indemnified Party. Notwithstanding the foregoing, nothing herein shall be construed to require the CONSULTANT to indemnify the Indemnified Parties from any Claim arising solely from:

- (A) the active negligence or willful misconduct of the Indemnified Parties; or
- (B) a natural disaster or other act of God, such as an earthquake; or
- (C) the independent action of a third party who is neither one of the Indemnified Parties nor the CONSULTANT, nor its principal, officer, agent, employee, nor the CONSULTANT's supplier, Subconsultant, Subcontractor, nor anyone employed directly or indirectly by any of them.

Exceptions (A) through (B) above shall not apply, and the CONSULTANT shall, to the fullest extent permitted by law, indemnify the Indemnified Parties from Claims arising from more than one cause if any such cause taken alone would otherwise result in the obligation to indemnify hereunder.

The CONSULTANT's liability for indemnification hereunder is in addition to any liability the CONSULTANT may have to OC San for a breach by the CONSULTANT of any of the provisions of this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit the CONSULTANT's indemnification obligation or other liability hereunder. The terms of this Agreement are contractual and the result of negotiation between the Parties. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code section 1654) that ambiguities are to be construed against the drafting Party shall not be employed in the interpretation of this Agreement.

SECTION 21. DUTY TO DEFEND

The duty to defend hereunder is wholly independent of and separate from the duty to indemnify and such duty to defend shall exist regardless of any ultimate liability of the CONSULTANT and shall be consistent with Civil Code section 2782.8. Such defense obligation shall arise immediately upon presentation of a Claim by any person if, without regard to the merit of the Claim, such Claim could potentially result in an obligation to indemnify one or more Indemnified Parties and upon written notice of such Claim being provided to the CONSULTANT. Payment to the CONSULTANT by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition precedent to enforcing such Indemnified Party's rights to indemnification hereunder. In the event a final judgment, arbitration, award, order, settlement, or other final resolution expressly determines that the Claim did not arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONSULTANT, to any extent, then OC San will reimburse the CONSULTANT for the reasonable costs of defending the Indemnified Parties against such Claims.

The CONSULTANT's indemnification obligation hereunder shall survive the expiration or earlier termination of this Agreement until such time as action against the Indemnified Parties for such matter indemnified hereunder is fully and finally barred by the applicable statute of limitations.

SECTION 22. COMPLIANCE WITH OC SAN POLICIES AND PROCEDURES

The CONSULTANT shall be required to comply with all OC San policies and procedures. OC San requires the CONSULTANT and its Subconsultants/Subcontractors to follow and ensure their employees follow all Federal, State, and local regulations as well as OC San's safety standards while working at OC San locations. If during the course of the contract it is discovered that OC San's safety standards do not comply with Federal, State, or local regulations, then the CONSULTANT is required to follow the most stringent regulatory requirement at no additional cost to OC San. The CONSULTANT and all of its employees and Subconsultants/Subcontractors shall adhere to all applicable Contractor Safety Standards attached hereto as Attachment "L".

SECTION 23. GOVERNING LAW

This Agreement shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in Orange County in the event any action is brought in connection with this Agreement or the performance thereof.

SECTION 24. TIME OF ESSENCE

Time is of the essence in the performance of this Agreement.

SECTION 25. CONFLICT OF INTEREST

The CONSULTANT covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of the services contemplated by this Agreement. No person having such interest shall be employed by or associated with the CONSULTANT.

SECTION 26. ENTIRE AGREEMENT

This Agreement constitutes the entire understanding and agreement between the Parties and supersedes all previous negotiations between them pertaining to the subject matter hereof.

[THIS SECTION INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, this Agreement has been executed in the name of OC San and the CONSULTANT by their respective duly authorized officers, as of the date first written above.

DUDEK

By _____ Date _____

Printed Name & Title

ORANGE COUNTY SANITATION DISTRICT

By _____ Date _____
Chad P. Wanke
Board Chairman

By _____ Date _____
Kelly A. Lore
Clerk of the Board

By _____ Date _____
Ruth Zintzun
Finance & Procurement Manager

Attachments: Attachment "A" Sample Scope of Work
Attachment "B" Not Used
Attachment "C" Not Used
Attachment "D" Allowable Direct Costs
Attachment "E" Rates Proposal
Attachment "F" Not Used
Attachment "G" Not Used
Attachment "H" Not Used
Attachment "I" Not Used
Attachment "J" Not Used
Attachment "K" Not Used
Attachment "L" Contractor Safety Standards
Attachment "M" Iran Contracting Act Verification

ATTACHMENT “A”

SAMPLE SCOPE OF WORK

ATTACHMENT "A"

SAMPLE SCOPE OF WORK DESCRIPTION

OC SAN staff will develop detailed scope of work to be included in each Request for Task Order Proposal (RFTOP). The RFTOP will require Consultants to base their proposals on the scope of work included in the RFTOP. The remainder of this document are the templates typically used for design projects. Notes to scope editor are shown, although they will be removed before a scope of work is included in a RFTOP. Yellow highlighted text indicates where project specific information or a hypothetical example is given.

Design Task Order

Attachment A - Scope of Work

1 PROJECT REQUIREMENTS

Provide professional design engineering services for the project described herein.

1.1 BACKGROUND

- A. The Secondary Clarifiers at Plant No. 1 were constructed under Project Nos. P1-16 (1973), P1-36-2 (1995), and P1-82 (2005). A buried ductile iron plant water line around the secondary clarifiers feeds the scum sprayers and hose bibs. Because the plant water chemical composition is so corrosive to ductile iron, many failures have occurred.

1.2 GENERAL PROJECT DESCRIPTION

- A. This project includes the replacement of approximately 1800 feet of existing 6-inch ductile iron buried plant water piping, valves, fittings, and connections.
- B. A location map is provided in **Figure 1**.

[insert location map]

Figure 1 - Project Location Map

1.3 PROJECT ELEMENTS

- A. **Element 1: Piping** – Replace the existing 1,800 feet of 6-inch buried ductile iron plant water piping with new 6-inch plant water piping.
- B. Assumptions for level of effort:
1. 1,600 feet of piping shall be below grade and 200 feet shall be either above or below grade.
 - a. 1,600 feet of piping is located around the Secondary Clarifiers. Assume high-density polyethylene (HDPE) as the pipe material with appropriate dimension ratio value.
 - b. 200 feet of piping will re-route the existing plant water line on the northwest end of the Secondary Clarifiers. Recent projects disconnected the existing plant water line at various locations resulting in an incomplete loop. This piping will reconnect the lines to allow for a complete loop. See Exhibit 13.1 for photos and Exhibit 13.3 for proposed routing design.
 - (1) For above grade pipe material, assume cement-lined ductile iron or fiberglass-reinforced plastic.
 2. Follow existing alignment with new pipe. New alignments shall be kept as close to the existing alignment as feasible.
 - a. The Secondary Effluent Junction Box No. 4 (SEJB-4), located at the southwest corner of the Secondary Clarifiers, is congested with various utilities, such as plant water, secondary effluent, and reclaimed water lines, and associated valves. Follow the existing alignment in this important area.
 - b. Concrete encasement of HDPE, located on the west side of the Secondary Clarifiers on Fuentes Road, was installed under project P1-102 (2006). Assume potholing is necessary to survey the edge of the concrete and confirm the limits of the existing concrete encasement

do not interfere with this project. As much as possible, the new alignment shall avoid the concrete encasement.

1.4 PROJECT SCHEDULE

- A. **Table 1** lists major project deliverables along with Orange County Sanitation District's (OC SAN) review and approval periods. CONSULTANT shall comply with the deadlines indicated in that table. OC SAN will consider an alternative CONSULTANT proposed schedule provided it is consistent with OC SAN resources, schedule constraints, and adds value. The negotiated durations will set the design baseline schedule.

Table 1 – Project Milestones and Deadlines

MILESTONE	DEADLINE
Kickoff Meeting	The kickoff meeting will be scheduled to coincide with the Project Notice to Proceed (NTP).
Preliminary Design Memo (PDM)	[XX] workdays from Preliminary Design Phase NTP.
OC SAN Review of PDM	10 workdays from receipt of PDM.
Submit Design Submittal 3 (DS3)	[YY] workdays from approval of PDM.
OC SAN Review of DS3	15 workdays from receipt of DS3.
Submit Final Design Submittal (FDS)	15 workdays from receipt of OC SAN comments on DS3.
OC SAN Review of FDS	10 workdays from receipt of FDS.
Submit Final Technical Plans and Specifications (FTPS)	15 workdays from receipt of OC SAN comments on FDS.
Total	[ZZZ] workdays

1.5 PROJECT MANAGEMENT

- A. CONSULTANT shall be responsible for managing CONSULTANT's project execution, schedule, budget, subconsultants, and coordination with other projects.
- B. Per **Exhibit 18**, PMWeb will be used for the management of this agreement.
- C. [Monthly Progress Report: Submit monthly progress reports at the same time as monthly invoices that include the following contents:
1. Work activities completed to date, in the current reporting period, and projected for the coming month.
 2. A brief description of outstanding issues and potential cost, schedule, quality impacts.
 3. Potential changes in the project scope or design scope.
 4. Any corrective actions needed to avoid potential impacts.
 5. Budget status: actual costs to date, costs to complete, and costs at completion.
 6. Schedule status: variances between scheduled and forecasted milestone dates.]
- D. Monthly Invoices: Provide a monthly cost report and/or invoices, which shall document the man-hours and billing rate for each person that works on the project, and shall include the following:
1. Budget
 2. Current billing period invoicing
 3. Previous billing period "total invoiced to date"
 4. Budget Amount Remaining
 5. Current billing period "total percent invoiced to date"

1.6 QUALITY CONTROL

- A. Provide Quality Assurance and Quality Control of the work.
- B. Provide documentation upon request that the CONSULTANT has performed a quality control review in-house, and all the comments have been addressed prior to providing any submittals to OC SAN.

1.7 PROJECT MEETINGS

- A. CONSULTANT shall communicate throughout the project to keep OC SAN apprised of the job, review work-in-progress, share information, discuss project submittals, present findings of technical analyses, receive and resolve comments, and obtain decisions and direction by OC SAN staff.
 - 1. **Table 2** below lists the anticipated meetings and site visits. Microsoft Teams shall be used for meetings. CONSULTANT will provide an agenda 2 workdays prior to each meeting. Meeting minutes will be submitted to the OC SAN project manager for review within 3 workdays of the meeting.

Table 2 – Project Assumed Meetings and Site Visits

DESIGN ACTIVITY	MEETINGS	SITE VISITS
Kickoff Meeting	1 (1-hour)	
PDM	Progress meeting (1-hour, every 2 weeks)	8 hours
PDM Workshop	2 (1-hour)	
DS3	Progress meeting (1-hour, every 2 weeks)	8 hours
DS3 Workshop	2 (1-hour)	
FDS	Progress meeting (1-hour, weekly)	
FDS Workshop	1 (1-hour)	
FTPS	Progress meeting (1-hour, weekly)	
Construction Services	6 hours	24 hours
Closeout	4 hours	12 hours

1.8 SUBMITTAL REVIEWS

- A. Deliverables (other than specifications) shall be submitted in searchable PDF format with no hard copy. Deliverables shall be bookmarked and hyperlinked for navigation per **Exhibit 14**.
- B. OC SAN has standardized on the use of Bluebeam Revu for reviewing and providing comments to PDF files. The purpose of the studio session is to provide review and collaboration. OC SAN staff will create the Bluebeam studio session, invite attendees, configure, and manage the studio session. Make drawing submittals in Bluebeam and respond to OC SAN comments in Bluebeam per **Exhibit 15**.

1.9 SPECIFICATIONS

- A. Prior to preparing or editing specifications, CONSULTANT shall meet with OC SAN staff to determine which OC SAN and CONSULTANT provided specifications should be included in the design. After discussions, all specifications should be loaded in Microsoft Teams (Teams) early in design and prior to editing for DS3.
- B. Tailor all specifications to project and remove requirements that do not apply.
- C. Unless a CONSULTANT is using their own specification management software, Specifications should remain in Teams for editing throughout design. Make all edits to specifications hosted in Teams. Unless agreed to, Specifications should not be removed from Teams or edited elsewhere.
- D. Provide specifications as Microsoft Word (Word) files with Track Changes enabled throughout design.

- E. OC SAN staff will review specifications during submittal review periods. CONSULTANT shall respond to OC SAN comments using Word “Reply” and “Resolve.” CONSULTANT shall “Reply” to each OC SAN comment describing how the comment will be addressed and revise the specification, as needed, to address the comment. “Resolve” will be used by the reviewer or designee to confirm their comment has been addressed. For more information see **Exhibit 16**.
- F. Prior to advertisement, all Word comments and revisions shall be Track Changes accepted, rejected, resolved, or deleted by OC SAN staff prior to bid.

2 PRELIMINARY DESIGN

All significant material and equipment decisions are to be made before the start of Design. At the end Preliminary Design, major design elements shall be fixed, and major equipment, footprints, and utility connection locations shall be well established. The extent of the design and the number and type of drawings shall also be established.

2.1 PRELIMINARY DESIGN AND PDM

- A. The PDM shall consist of a PowerPoint presentation. Present PDM findings and recommendations to OC SAN in a stakeholder meeting using the PowerPoint presentation mentioned in this section for consensus before the start of Design.
- B. Identify any equipment that has one competitive supplier (i.e., sole source). In those cases, recommend an appropriate procurement strategy compatible with California Law and OC SAN policies.
- C. Develop 2 conceptual design alternatives for the plant water piping alignment.
 - 1. Alternatives:
 - a. Reuse exiting alignment and existing points of connection
 - b. Alternate alignment along tunnels in and around secondary clarifiers
 - 2. Perform the following with each alternative:
 - a. Cost, benefit, and life cycle analysis.
 - b. Identify plant water construction shutdown requirements with estimated durations.
 - c. Identify construction access requirements and limitations.
 - d. Prepare preliminary drawings (sketches).
 - 3. Discuss the available alternatives with OC SAN. The PDM shall include the recommendation alternative.
- D. Prepare drawings showing:
 - 1. Proposed alignment of piping
 - 2. Proposed piping materials and quantities
 - 3. Proposed quantity and type of valves and valve cans
 - 4. Proposed connection points which include the following:
 - a. New replacement pipes connecting to existing main plant water line
 - b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
 - 5. Demolition of existing ductile iron pipes and valves
 - 6. Proposed design of new valves and valve cans
 - 7. Proposed design of connection points
 - a. New replacement pipes connecting to existing main plant water lines

- b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
- 8. Proposed design of pipe supports by typical detail and max spacing table
- E. Summarize key constructability and construction sequencing constraints.
 - 1. Develop process flow schematic of the components of the plant water system at Plant No. 1 that impact the pipelines being replaced.
- F. Prepare preliminary construction schedule.
- G. Prepare P&IDs: Fully detailed for each design "module", e.g., 1 pump set typical of all with proposed tagging strategy.
- H. Perform any potholing activities required for the concrete encasement survey specified under Element 1.
- I. Quantify soil contamination by determining the volume of excavation work needed to perform the Work. Coordinate with OC SAN ENGINEER to determine the area of excavation. Soil testing is not necessary.
- J. Develop testing requirements. Assume:
 - 1. Pressure leak and valve testing shall be included.
 - 2. Plant water operating pressure is 110 PSI.

2.2 PRELIMINARY DESIGN CONSTRUCTION COST ESTIMATE

- A. Prepare an AACE International Class 3 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01. Data used to prepare the cost estimate shall be included as an attachment to the PDM.
 - 1. Determine project specific and appropriate values to use for the percentages for profit, bond, and insurance.
 - 2. Costs for project level allowance, insurance, profit, and bond shall be cumulative and listed as individual line items.
 - 3. Allowances or mark ups should be well explained and itemized.
 - a. Include "Market Volatility" allowance of xx%.(revise based on the market conditions)
 - b. Do not setup allowance for change orders.
 - c. Do not escalate to midpoint of construction - this is by OC SAN.
 - 4. Specialty work should be recently (under 6 months) estimated by vendor.
 - a. For example, sewer bypassing services should be estimated by vendor (i.e., Rain 4 Rent).
 - b. Provide vendor quotes for high-cost equipment.
 - c. Minor equipment costs may be documented by written telephone quotations.
 - 5. Provide breakdown of lump sum costs.
 - 6. Show labor rates so they can be checked.
 - 7. Provide all back back up for all documentation obtained for the cost estimate purposes. The cost estimate back up shall have the date and the vendor name/contact name. If catalog price is used, provide the year of that publication.
- B. Prepare estimate of construction duration. The suggested construction duration shall take in considerations the verifiable lead time for all equipment.

3 DESIGN

Prepare biddable plans, technical specifications, other Bid Documents, and any associated design calculations, required to complete the Project Elements.

3.1 DS3 DELIVERABLES

- A. Meet at a 50% completion level with OC SAN staff to review design progress. Formal deliverables are not necessary. QA/QC is also not required for this preview.
- B. At this submittal, the design is essentially finished and submitted as complete. DS3 shall include all finished and checked plans and specifications. OC SAN staff will review DS3 and provide comments to the drawings and specifications. The CONSULTANT should be finished with no remaining design work except for OC SAN comments provided at DS3 review and their incorporation at FDS.
- C. [Prepare construction drawings in CAD conforming to OC SAN's CAD Manual. A CAD compliance check will be performed at DS3 (Exhibit 17, Chapter 8 explains the CAD compliance check, and Appendix D contains the "CAD Standards Compliance Checklist" summarizing all items checked by OC SAN). OC SAN will provide base layers and utilities for Work locations within the treatment plant boundaries.]

3.2 DS3 COST ESTIMATE

- A. Prepare an AACE International Class 2 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01 based on the DS3 design. Data used to prepare the cost estimate shall be included as an attachment to DS3.
- B. Prepare estimate of construction duration.

3.3 FDS DELIVERABLES

- A. Final Design Submittal (FDS) is for OC SAN to confirm all comments from DS3 have been addressed and incorporated and add any additional comments.

3.4 FTSP DOCUMENTS

- A. Final Technical Plans and Specifications is for the CONSULTANT to address and incorporate all comments and provide all necessary stamps and signatures for a complete bid package suitable for advertisement by OC SAN.

3.5 CONSTRUCTION COST ESTIMATE "ENGINEER'S ESTIMATE"

- A. 30 calendar days prior to advertisement, refresh the DS3 Class 2 cost estimate. Get updated vendor quotes used to prepare the DS3 cost estimate. This will become the Engineer's Estimate published in the front-end documents.

3.6 PERMITTING ASSISTANCE ([ALLOCATE 60 HOURS] [NOT INCLUDED IN THIS AGREEMENT])

- A. [For all applicable Project Elements of this Scope of Work, provide Bid Documents that ensure that the design complies with all conditions of existing permits and permits required to construct and implement this project. Testing, construction drawings, specifications, and supplemental drawings shall be prepared, as necessary, in the format required to obtain all permits.]
- B. Assist OC SAN in obtaining permits. This assistance shall include identifying applicable permits, completing required design, plan preparation, application forms provided by OC SAN, preparing supporting documentation for the permit applications as required by the issuing agency, furnishing the required number of copies of all construction drawings and exhibits, and attend meetings with permitting agencies at the request of OC SAN.
- C. Except for construction contractor-furnished permits, OC SAN staff will execute all applications. CONSULTANT shall determine the cost and requirements of all permits. All permit fees will be paid directly by OC SAN and will not be part of CONSULTANT's fee.
- D. Submit all supporting documentation in a timely fashion for all permits required for this project as described below.
 - 1. Caltrans Encroachment Permits

- a. Determine if encroachment permits or other types of permits are required by Caltrans for the design and construction phases. Provide the work necessary to obtain such permits including coordinating and attending meetings.

2. City/County Encroachment Permits

- a. Provide coordination, work effort, and attend meetings, as required, to obtain encroachment permits from each city and agency who has jurisdiction. Process the plans through the cities and agencies for approval, revise plans, and meet with them, as required, to obtain approval.]

3.7 BID SUPPORT SERVICES

- A. Provide answers to bidder's questions related to the design. Provide revisions to specifications and drawings when needed for addendum.
- B. Within 2 weeks of the bid opening date, prepare conformed document set (drawings, databases, specification, and other required materials) that incorporates the addenda. See requirements of OC SAN's CAD Manual.

3.8 POPULATE PMWEB LIST OF SUBMITTALS (ALLOCATE 24 HOURS)

- A. PMWeb is used to manage communication with the contractor. OC SAN uses an Excel template to populate the list of all submittals. The CONSULTANT shall review each project specification and complete the Submittal Items Template as follows:
 1. Enter the list of project specifications.
 2. Enter the list of commissioning packages. Commissioning packages are defined by Section 01810, Commissioning.
 3. Enter the following information for each submittal item.
 - a. Specification section: enter the specification section requiring the submittal.
 - b. Submittal Item description: enter the description of the submittal. Submittal items that refer to multiple specifications shall include referenced specification sections in brackets.
 - c. Comments: enter notes, comments, or clarifications. This field is optional.
 - d. Commissioning package: enter the commissioning package of the submittal item. Submittal items shall be duplicated when the same submittal is required for multiple commissioning packages. Items shall be separated into mobilization, general construction, or a commissioning package defined by the project specifications.
 - e. Phase: Identify which phase each submittal is required to be approved.
 - f. Retention: Specify if the submittal is a Project File or Facility Record based on OC SAN's Records Retention Policy.
 - g. Lead time: Specify the appropriate number of workdays that OC SAN has to review the particular submittal.
 - h. Load: Specify if the submittal should be loaded into PMWeb prior to NTP, upon contractor approval, or prior to the start of commissioning.
- B. OC SAN will provide a PMWeb Master Submittal Items template that includes the submittals required by OC SAN's Master Specifications. The CONSULTANT shall not deviate from the Master PMWeb Submittal Items, except as required by the project specific specifications. The CONSULTANT shall develop submittal items for specifications that are not part of OC SAN's Master Specifications.
- C. OC SAN will provide a 1-hour virtual training on the use of the PMWeb Master Submittal Items Template.
- D. The CONSULTANT shall populate, receive comments, address comments, and provide completed submittal form as follows:
 1. 20 workdays after advertisement date.

3.9 SAFETY AND RISK MEETING

- A. Ensure that an OC San Risk Management safety and security professional has been assigned to the project.
- B. CONSULTANT shall prepare and meet with OC San Risk Management personnel at all design stages to review Exhibit 11 Sample Full Project Safety Review Plan and Exhibit 12 Sample Risk Management Check List. This shall be completed in accordance with Exhibit 4 Risk Management Requirements.
- C. CONSULTANT shall update Exhibits 11 and 12 throughout the design phases. CONSULTANT shall provide OC San Risk Management with the final copies of Exhibit 11 and Exhibit 12 at completion of the Design Project.

4 CONSTRUCTION SERVICES

OC SAN will administer and provide field inspection for construction contracts. Construction and installation support services shall be provided by the CONSULTANT on an as-needed basis and as requested by OC SAN. The services are indicated below.

4.1 SUBMITTAL REVIEWS (ALLOCATE 15 HOURS)

- A. OC SAN will manage submittal review. The CONSULTANT shall use PMWeb to review and return comments to OC SAN. Return comments within 5 workdays.

4.2 REQUESTS FOR INFORMATION (RFIS) (ALLOCATE 15 HOURS)

- A. OC SAN will manage the processing of RFI's. When requested by OC SAN, CONSULTANT shall return written responses to OC SAN within 5 workdays of receipt of RFI using PMWeb. Generate necessary sketches, figures, and modifications to the drawings for clarifications.

4.3 PROGRESS MEETINGS AND SITE VISITS

- A. Refer to **Table 2**.

4.4 RECORD DRAWINGS

- A. Verify that the Contractor's As-Built set correctly reflects the information included in the approved shop drawings, RFIs, approved Field Change Orders, plan clarifications, plan changes, and other deviations from the conformed drawings, and that the information in the set is complete.
- B. Draft Record Drawings shall be submitted to OC SAN within 4 weeks of receipt from OC SAN of the approved Contractor's As-Built drawings. The Final Record Drawings shall be submitted within one week of receipt of OC SAN comments on the Draft Record Drawings.
- C. Prepare Draft Record Drawings based on the Final Field Markup Set for all drawings in accordance with the requirements in the CAD Manual. Submit the Draft Record Drawings to the OC SAN Resident Engineer. The Draft Record Drawings will be reviewed for content and CAD compliance by OC SAN staff. If no comments are identified, CONSULTANT shall prepare the Final Record Drawings and submit them along with the Contractor's field markup set to the Project Manager. For content and placement of record drawing stamp, see CAD Manual.
- D. Submit an electronic copy of the record drawings to OC SAN for review and approval. The acceptance of the record drawings shall be deemed a condition for completion of work.
- E. Contractor-generated drawings described in the Design Guidelines and the shop drawings will not be updated by CONSULTANT. The format and quantities for delivery of the submittals shall be listed below:

Contents	Draft Record Drawings	Final Record Drawings
All related electronic files, including CAD and compiled PDFs.	One copy to be uploaded to Microsoft Teams.	One copy to be uploaded to Microsoft Teams.

4.5 EQUIPMENT INFORMATION DATABASE (EID) (ALLOCATE [X] HOURS [NOT INCLUDED IN THIS AGREEMENT])

- A. OC SAN uses Maximo software to manage and track asset information. When new assets are added or existing assets are modified by a project, an EID Excel spreadsheet is used to populate or update Maximo asset information. CONSULTANT shall meet with OC SAN EIM staff to request an EID spreadsheet pre-populated with the new or modified assets. OC SAN staff will provide training on how to populate the EID spreadsheet. Field work will be needed to apply equipment tags and record equipment nameplate information and serial numbers to populate the EID. Coordinate with Maintenance Specialists (David Haug or designee, Div. 870) to walk new facilities to verify accuracy of P&IDs and EID.

4.6 [UPDATE BASELINE DRAWINGS]

5 STAFF ASSISTANCE

OC SAN staff member or designee assigned to work with CONSULTANT on the design of this project is Jessica Cheung. Phone (714) 593-7147, e-mail jcheung@ocsan.gov.

6 EXHIBITS

- A. Exhibits 1-3, 5-10 – Not Used
- B. Exhibit 4 – Risk Management Requirements
- C. Exhibit 11 – Sample Full Project Safety Review Plan
- D. Exhibit 12 – Sample Risk Management Checklist
- E. Exhibit 13 – Project Reference Material
 - a. 13.1 – Photos
 - b. 13.2 – Plant 1 Plant Water System Map
 - c. 13.3 – Proposed Design Idea (The CONSULTANT may start with this conceptual design.)
 - d. 13.4 – Proposed Valve Cans (The CONSULTANT may start with this conceptual design.)
 - e. 13.5 – Record Drawings (Available Upon Request)
 - (1) P1-82, Activated Sludge Plant Rehabilitation (2005)
 - (2) P1-36-2, Secondary Treatment Improvements at Plant No. 1 (1995)
 - (3) P1-16, 46 MGD Activated Sludge Plant at Reclamation Plant No. 1 (1973)
 - (4) P1-102, Secondary Activated Sludge Facility 2 at Plant No.1 (2006)
- F. Exhibit 14 – BlueBeam Designer Training for Submission
- G. Exhibit 15 – BlueBeam Designer User Training
- H. Exhibit 16 – Spec Review using Microsoft Word and Teams
- I. Exhibit 17 – [CAD Standard Manual](#)
- J. Exhibit 18 – PMWeb

JC:tk

PROFESSIONAL DESIGN SERVICES AGREEMENT

This PROFESSIONAL DESIGN SERVICES AGREEMENT (Agreement), to be effective this 1st day of July, 2024, is made and entered into by and between:

ORANGE COUNTY SANITATION DISTRICT
hereinafter referred to as "OC San"

AND

GHD INC.
hereinafter referred to as "CONSULTANT"

individually referred to as the "Party" and collectively as the "Parties".

RECITALS

WHEREAS, in accordance with Ordinance No. OC SAN-61 and pursuant to a Request for Qualifications ("Underlying RFQ"), the Board of Directors of OC San, by action on May 22, 2024, approved the award of the Agreement for **CONTRACT NO. FE24-00-06**, to CONSULTANT to provide services for selected projects on a task order (Task Order) basis from July 1, 2024 to June 30, 2027; and

WHEREAS, consistent with the Underlying RFQ, the CONSULTANT has been prequalified to perform services for the following project types: Project Type 2: Linear and Collections and Project Type 3: Process, Electrical and Instrumentation & Control (I&C); and

WHEREAS, for Task Orders estimated to cost \$100,000 or less, the Director of Engineering, with concurrence of the Purchasing Manager, may solicit a proposal from one (1) firm on the prequalified list, which will include the project types for which the consultants are prequalified; and

WHEREAS, the CONSULTANT is qualified to provide and has agreed to provide the necessary professional engineering and related services under this Agreement; and

WHEREAS, by this Agreement, the Parties intend to set forth the general terms and conditions that will apply to any specific project for which CONSULTANT is given a Task Order by OC San.

NOW, THEREFORE, OC San and the CONSULTANT mutually agree as follows:

SECTION 1. SCOPE OF AGREEMENT

OC San, at its sole discretion, may, from time to time during the term of this Agreement, issue a Request for Task Order Proposal ("RFTOP") setting forth the detailed requirements and scope of work to be performed on the identified project and thereafter, upon receipt of a proposal from the CONSULTANT, may issue a Task Order to proceed with the work. The scope of work will be in a form attached hereto as Attachment "A" – Sample Scope of Work.

Upon execution by OC San, the Task Order shall become an operative part of this Agreement. Should any conflict or inconsistency exist in the contract documents identified in this section, the conflict or inconsistency shall be resolved by applying the provisions in the highest priority document, which shall be determined in the following order of priority:

1. Agreement and any amendments thereto
2. the Task Order
3. the RFTOP

CONSULTANT's duties and services under this Agreement shall not include preparing or assisting the public entity with any portion of the public entity's preparation of a request for proposals, request for qualifications, or any other solicitation regarding a subsequent or additional contract with the public entity. The public entity entering this Agreement shall at all times retain responsibility for public contracting, including with respect to any subsequent phase of this project. CONSULTANT's participation in the planning, discussions, or drawing of project plans or specifications shall be limited to conceptual, preliminary, or initial plans or specifications. CONSULTANT shall cooperate with the public entity to ensure that all bidders for a subsequent contract on any subsequent phase of this project have access to the same information, including all conceptual, preliminary, or initial plans or specifications prepared by CONSULTANT pursuant to this Agreement.

SECTION 2. TASK ORDER ISSUANCE BY OC SAN

The Task Order issued by OC San shall, specifically or by reference to the RFTOP and corresponding proposal, set forth the terms that will apply to the specific project for which the services will be rendered. Those terms shall include, but not be limited to, scope of work, time for performance, and compensation.

SECTION 3. TERM

This Agreement shall commence on the effective date of this Agreement and terminate on June 30, 2027, unless further extended by written agreement signed by the Parties. Any work that is required by a Task Order and is not finished by the date of termination shall be continued and completed by the CONSULTANT and the terms and conditions of this Agreement shall continue in effect for that time. OC San may, at its option, renew this Agreement for two (2) additional terms of one (1) year each, for a maximum contract duration of five (5) years.

SECTION 4. COMPENSATION

The total compensation payable to the CONSULTANT pursuant to this Agreement shall not exceed One Million Dollars (\$1,000,000) per year in accordance with the terms described in SECTION 3 - TERM. The compensation includes, but is not limited to, fees for professional engineering services based on the CONSULTANT's burdened labor rates, overhead, and profit, and fees from the CONSULTANT's subconsultants/subcontractors (Subconsultants/Subcontractors). The specific amount of compensation payable to the CONSULTANT for services rendered on an individual project, pursuant to a Task Order, shall be established for each Task Order and shall not exceed Five Hundred Thousand Dollars (\$500,000) per individual Task Order unless authorized by OC San's Board of Directors. The

CONSULTANT agrees and acknowledges that the execution of this Agreement does not in any way guarantee that a Task Order will be issued to the CONSULTANT. Moreover, execution of this Agreement shall not entitle the CONSULTANT to any form of payment or compensation from OC San without OC San first having issued a written Task Order.

A. Total Compensation

Total compensation for any Task Order shall not exceed the amount indicated in the approved Task Order and any approved amendments thereto.

B. Labor

As a portion of the total compensation to be paid to CONSULTANT, OC San shall pay to CONSULTANT a sum equal to the burdened salaries (salaries plus benefits) actually paid by CONSULTANT charged on an hourly-rate basis to the project and paid to CONSULTANT's personnel. For each Task Order, the cost of benefits for CONSULTANT shall be based on the fringe rates identified in Attachment "E" – Rates Proposal. Upon request of OC San, CONSULTANT shall provide OC San with certified payroll records of all employees' work that is charged to the project.

C. Overhead

As a portion of the total compensation to be paid to CONSULTANT, for each Task Order, OC San shall compensate CONSULTANT for overhead at the rates equal to the percentage of burdened labor as specified in Attachment "E" – Rates Proposal.

D. Profit

For each Task Order, profit shall be ten percent (10%) of burdened labor and overhead for all CONSULTANT fees and its Major Subconsultants (Architecture & Engineering [A&E] consulting services) whose fees for services are greater than or equal to \$100,000. Profit shall remain fixed through the term of this Agreement, inclusive of any renewals identified in Section 3 – TERM.

As a portion of the total compensation to be paid to CONSULTANT and its Major Subconsultants, OC San shall pay profit for all services rendered by CONSULTANT and its Major Subconsultants for the Task Order as specified in the previous paragraph.

E. Subconsultants

For each Task Order, any Minor Subconsultant (A&E consulting services) whose fees for services are less than \$100,000 and any Subconsultant/Subcontractor (non-A&E consulting services), CONSULTANT shall pay to Subconsultant/Subcontractor total compensation based on an established hourly rate schedule by personnel classification. The hourly rates shall cover burdened salary costs, overhead and profit. The compensation for each Minor Subconsultants and Subconsultants/Subcontractors (non-A&E consulting services), including both labor related fees, and direct costs shall not exceed the amount, as negotiated prior to award of a Task Order.

For each Task Order, any Major Subconsultant (A&E consulting services) whose fees for services are greater than or equal to \$100,000, total compensation for labor will be based

on burdened labor rates, overhead, and profit, as negotiated prior to award of Task Order. Prior to award of Task Order, the CONSULTANT shall provide to OC San, if available, an audit performed for another public agency which documents the Major Subconsultant's labor burden rate and overhead rate. This audit shall be the most current available and have been conducted for a period that ended within twelve months of the task order proposal due date. This information shall be provided by CONSULTANT within ten (10) business days from request by OC San.

F. Direct Costs

OC San shall reimburse CONSULTANT and its Subconsultants/Subcontractors the actual costs of permits and associated fees, travel, licenses, and other services in an amount not to exceed the sums set forth in each approved Task Order. OC San shall also pay to CONSULTANT actual costs for equipment rentals, leases or purchases with prior written approval of OC San. Upon request, CONSULTANT shall provide to OC San receipts and other documentary records to support CONSULTANT's request for reimbursement of these amounts, refer to Attachment "D" – Allowable Direct Costs. All incidental expenses shall be included in the overhead cost pursuant to this SECTION 4 – COMPENSATION.

G. Other Direct Costs

OC San will reimburse the CONSULTANT for Other Direct Costs incurred by CONSULTANT and its Subconsultants/Subcontractors due to modifications in the scope of work resulting from field investigations and field work required by the Task Order. These items may include special equipment, test equipment and tooling, and other materials and services not previously identified. Refer to Attachment "D" – Allowable Direct Costs for payment information.

H. Reimbursable Direct Costs

OC San will reimburse the CONSULTANT for reasonable travel and business expenses as described in this section and further described in Attachment "D" – Allowable Direct Costs. The reimbursement of the above-mentioned expenses will be based on an "accountable plan" as considered by the Internal Revenue Service (IRS). The plan includes a combination of reimbursements based upon receipts and a "per diem" component approved by the IRS. The most recent schedule of the per diem rates utilized by OC San may be found on the U.S. General Services Administration website at <https://www.gsa.gov/travel/plan-book/per-diem-rates>.

The CONSULTANT shall be responsible for the most economical and practical means of management of reimbursable costs inclusive, but not limited to, travel, lodging, and meals arrangements. OC San shall apply the most economic and practical method of reimbursement which may include reimbursements based upon receipts and/or "per diem" as deemed the most practical.

CONSULTANT shall be responsible for returning to OC San any excess reimbursements after the reimbursement has been paid by OC San.

Travel and travel arrangements – Any travel involving airfare, overnight stays, or multiple day attendance must be approved by OC San in advance.

Local travel is considered travel by the CONSULTANT within OC San general geographical area which includes Orange, Los Angeles, Ventura, San Bernardino, Riverside, San Diego, Imperial, and Kern Counties. Automobile mileage is reimbursable if CONSULTANT is required to utilize a personal vehicle for local travel.

Lodging – Overnight stays will not be approved by OC San for local travel. However, under certain circumstances overnight stay may be allowed at the discretion of OC San based on reasonableness of meeting schedules and the amount of time required for travel by the CONSULTANT. Such determination will be made on a case-by-case basis and at the discretion of OC San.

Travel Meals – Per diem rates as approved by the IRS shall be utilized for travel meals reimbursements. Per diem rates shall be applied to meals that are appropriate for travel times. Receipts are not required for the approved meals.

Additional details related to the reimbursement of the allowable direct costs are provided in Attachment “D” – Allowable Direct Costs.

I. Limitation of Costs

If, at any time, CONSULTANT estimates the cost of performing the services described in CONSULTANT's proposal will exceed seventy-five percent (75%) of the not to exceed amount of the Task Order, including any approved additional compensation, CONSULTANT shall notify OC San immediately, in writing. The written notice shall indicate the additional amount necessary to complete the services. Any cost incurred in excess of the approved not to exceed amount, without the express written consent of OC San's authorized representative, shall be at CONSULTANT's own risk. This written notice shall be provided separately from, and in addition to, any notification requirements contained in the CONSULTANT's invoice and monthly progress report. Failure to notify OC San that the services cannot be completed within the authorized not to exceed amount of a Task Order is a material breach of this Agreement.

J. Method of Payment:

The CONSULTANT shall submit for approval by OC San, monthly invoices based on the total services which have been satisfactorily completed and specifying a percentage of completion. The CONSULTANT's billings shall be certified for payment by OC San only after OC San has determined that the CONSULTANT has completed each applicable project task.

CONSULTANT shall submit separate invoices for each Task Order on a monthly basis.

CONSULTANT understands that submitted costs are subject to Section 11 - AUDIT PROVISIONS, below.

K. Task Order Completion

Upon satisfactory completion by CONSULTANT of the work called for under the terms of the Task Order and upon acceptance of such work by OC San, CONSULTANT will be paid the unpaid balance of any money due for such work.

Upon satisfactory completion of the work performed under each Task Order and prior to final payment under each Task Order for such work or prior settlement upon termination of this Agreement, and as a condition precedent thereto, CONSULTANT shall execute and deliver to OC San a release of all claims against OC San arising under or by virtue of this Agreement other than such claims, if any, as may be specifically exempted by CONSULTANT from the operation of the release in stated amounts to be set forth therein.

L. False Claims

Pursuant to the California False Claims Act (Government Code Sections 12650-12655), any CONSULTANT that knowingly submits a false claim to OC San for compensation under the terms of this Agreement may be held liable for treble damages and up to a Ten Thousand Dollars (\$10,000) civil penalty for each false claim submitted. This section shall also be binding on all Subconsultants/Subcontractors.

The CONSULTANT or its Subconsultants/Subcontractors shall be deemed to have submitted a false claim when the CONSULTANT or its Subconsultants/Subcontractors: (a) knowingly presents or causes to be presented to an officer or employee of OC San a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by OC San; (c) conspires to defraud OC San by getting a false claim allowed or paid by OC San; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to OC San; or (e) is a beneficiary of an inadvertent submission of a false claim to OC San and fails to disclose the false claim to OC San within a reasonable time after discovery of the false claim.

M. California Department of Industrial Relations (DIR) Registration and Record of Wages:

To the extent the CONSULTANT's employees and/or its Subconsultants/Subcontractors who will perform work during the design, preconstruction, and construction phases of a construction contract for which Prevailing Wage Determinations have been issued by the DIR and as more specifically defined under Labor Code Section 1720 et seq., CONSULTANT and its Subconsultants/Subcontractors shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4, the work is subject to compliance monitoring and enforcement by the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776 and shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Penalties for non-compliance with the requirements of Labor Code section 1776 may be deducted from progress payments per Labor Code section 1776.

Pursuant to Labor Code section 1776, the CONSULTANT and its Subconsultants/Subcontractors shall furnish a copy of all certified payroll records to OC San and/or general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 16461(e).

N. Record of Expenses:

The CONSULTANT shall keep complete and accurate records of all costs and expenses incidental to services covered by this Agreement. Such records will be made available to OC San upon request.

O. Reallocation of Total Compensation:

OC San, by its Director of Engineering, shall have the right to approve a reallocation of the incremental amounts constituting the total compensation payable under the Task Order, provided that the total compensation for the Task Order is not increased.

SECTION 5. LIMITATIONS UPON SUBCONTRACTING AND ASSIGNMENT

The CONSULTANT shall not contract with any other person or entity to perform the services required without the written approval of OC San. This Agreement may not be assigned voluntarily or by operation of law without the prior written approval of OC San. If the CONSULTANT is permitted to subcontract any part of this Agreement by OC San, the CONSULTANT shall be responsible to OC San for the acts and omissions of its Subconsultant/Subcontractor, as it is for persons directly employed by the CONSULTANT. Nothing contained in this Agreement shall create any contractual relationship between any Subconsultant/Subcontractor and OC San. All persons engaged in the work will be considered employees of the CONSULTANT. OC San will deal directly with and will make all payments to the CONSULTANT.

SECTION 6. CHANGES TO SCOPE OF WORK

In the event of a change in the scope of work as requested by OC San or any other changes to the Task Order, the Parties shall execute an amendment to the Task Order setting forth with particularity all new terms of the Task Order, including, but not limited to, any additional compensation.

SECTION 7. DOCUMENT OWNERSHIP – CONSULTANT PERFORMANCE

- A. All documents in all forms (electronic, paper, etc.), including, but not limited to, studies, sketches, drawings, computer printouts, disk files, and electronic copies prepared in connection with or related to the scope of work shall be the property of OC San. OC San's ownership of these documents includes use of, reproduction or reuse of, and all incidental rights, whether or not the work for which they were prepared has been performed. OC San's ownership entitlement arises upon payment or any partial payment for work performed and includes ownership of any and all work product completed prior to that payment. This section shall apply whether the CONSULTANT's services are satisfied by the completion of the Agreement or are terminated in accordance with other provisions of this Agreement. Notwithstanding any other provision of this section or Agreement, the CONSULTANT shall have the right to make copies of all such plans, studies, sketches, drawings, computer printouts and disk files, and specifications.

- B. CONSULTANT shall not be responsible for damage caused by subsequent changes to or uses of the deliverables where the subsequent changes or uses are not authorized or approved by CONSULTANT, provided that the service rendered by CONSULTANT was not a proximate cause of the damage.

C. Copies of Work Product

Upon completion of the work required for each Task Order, the CONSULTANT shall deliver to OC San the number of copies specified in the specific Task Order scope of work of the final report containing the CONSULTANT's findings, conclusions, recommendations, and all supporting documentation and/or final design drawings and specifications. Each Task Order will define the requirements for the deliverables.

SECTION 8. INSURANCE

A. General:

- i. Insurance shall be issued and underwritten by insurance companies acceptable to OC San.
- ii. Insurers must have an "A-" Policyholder's Rating, or better, and Financial Rating of at least Class VIII, or better, in accordance with the most current A.M. Best's Guide Rating. However, OC San will accept State Compensation Insurance Fund for the required policy of Worker's Compensation Insurance subject to OC San's option to require a change in insurer in the event the State Fund financial rating is decreased below "B". Further, OC San will require CONSULTANT to substitute any insurer whose rating drops below the levels herein specified. Said substitution shall occur within twenty (20) days of written notice to CONSULTANT by OC San or its agent.
- iii. Coverage shall be in effect prior to the commencement of any work under this Agreement.

B. General Liability:

The CONSULTANT shall maintain during the life of this Agreement, including the period of warranty, Commercial General Liability Insurance written on an occurrence basis providing the following minimum limits of liability coverage: Two Million Dollars (\$2,000,000) per occurrence with Four Million Dollars (\$4,000,000) aggregate. If aggregate limits apply separately to this Agreement (as evidenced by submission of ISO form CG 25 03 or CG 25 04), then the aggregate limit may be equivalent to the per occurrence limit. Said insurance shall include coverage for the following hazards: Premises-Operations, blanket contractual liability (for this Agreement), products liability/completed operations (including any product manufactured or assembled), broad form property damage, blanket contractual liability, independent contractors liability, personal and advertising injury, mobile equipment, owners and contractors protective liability, and cross liability and severability of interest clauses. A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement(s). If requested by OC San and applicable, XCU coverage (Explosion, Collapse and Underground) and Riggers/On Hook Liability must be included in the General Liability policy and coverage must be reflected on the submitted Certificate of Insurance.

C. Umbrella Excess Liability:

The minimum limits of general liability and automobile liability insurance required, as set forth herein, shall be provided for through either a single policy of primary insurance or a combination of policies of primary and umbrella excess coverage. Umbrella excess liability coverage shall be issued with limits of liability which, when combined with the primary insurance, will equal the minimum limits for general liability and automobile liability.

D. Automobile/Vehicle Liability Insurance:

The CONSULTANT shall maintain a policy of automobile liability insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and other vehicles providing the following minimum limit of liability coverage: combined single limit of One Million Dollars (\$1,000,000). A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement.

E. Drone Liability Insurance:

If a drone will be used, drone liability insurance must be maintained by the CONSULTANT in the amount of One Million Dollars (\$1,000,000) in a form acceptable to OC San.

F. Worker's Compensation Insurance:

The CONSULTANT shall provide such Workers' Compensation Insurance as required by the Labor Code of the State of California in the amount of the statutory limit, including Employer's Liability Insurance with a minimum limit of One Million Dollars (\$1,000,000) per occurrence. Such Worker's Compensation Insurance shall be endorsed to provide for a waiver of subrogation in favor of OC San. A statement on an insurance certificate will not be accepted in lieu of the actual endorsements unless the insurance carrier is the State of California Insurance Fund and the identifier "SCIF" and applicable endorsements are referenced on the certificate of insurance. If an exposure to Jones Act liability may exist, the insurance required herein shall include coverage for Jones Act claims.

G. Errors and Omissions/Professional Liability:

The CONSULTANT shall maintain in full force and effect, throughout the term of this Agreement, standard industry form professional liability/errors and omissions insurance coverage with coverage limits of not less than Two Million Dollars (\$2,000,000) in accordance with the provisions of this paragraph. If the policy of insurance is written on a "claims made" basis, said policy shall be continued in full force and effect at all times during the term of this Agreement and for a period of five (5) years from the date of the completion of the services hereunder.

In the event of termination of said policy during this period, the CONSULTANT shall obtain continuing insurance coverage for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement. Said coverage shall be evidenced by either a new policy evidencing no gap in coverage or by separate extended "tail" coverage with the present or new carrier.

In the event the present policy of insurance is written on an “occurrence” basis, said policy shall be continued in full force and effect during the term of this Agreement or until completion of the services provided for in this Agreement, whichever is later. In the event of termination of said policy during this period, new coverage shall be obtained for the required period to insure for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement.

The CONSULTANT shall provide to OC San a certificate of insurance in a form acceptable to OC San indicating the deductible or self-retention amounts and the expiration date of said policy and shall provide renewal certificates not less than ten (10) days prior to the expiration of each policy term.

H. Proof of Coverage:

The CONSULTANT shall furnish OC San with original certificates and amendatory endorsements effecting coverage. Said policies and endorsements shall conform to the requirements herein stated. All certificates and endorsements must be received and accepted by OC San before work commences. OC San reserves the right to require, at any time, complete, certified copies of all required insurance policies, including endorsements, effecting the coverage required. The following are approved forms that must be submitted as proof of coverage:

- | | |
|--|---|
| • Certificate of Insurance | ACORD Form 25 or other equivalent Certificate of Insurance form |
| • Additional Insurance (General Liability) | The combination of (ISO Forms) CG 2010 <u>and</u> CG 2037

All other additional insured endorsements must be submitted for approval by OC San and OC San may reject alternatives that provide different or less coverage to OC San. |
| • Additional Insured (Auto Liability) | Submit Endorsement provided by carrier for OC San’s approval. |
| • Waiver of Subrogation | Submit workers’ compensation waiver of subrogation endorsement provided by carrier for OC San’s approval. |
| • Cancellation Notice | No endorsement is required. However, Vendor/Contractor is responsible for notifying OC San of any pending or actual insurance policy cancellation, as described in Article I. Cancellation and Policy Change Notice below. |

I. Cancellation and Policy Change Notice:

The CONSULTANT is required to notify OC San in writing of any insurance cancellation notice it receives or other knowledge of pending or actual insurance policy cancellation, within two (2) working days of receipt of such notice or acquisition of such knowledge. Additionally, the CONSULTANT is required to notify OC San in writing of any change in the terms of insurance, including reduction in coverage or increase in deductible/SIR, within two (2) working days of receipt of such notice or knowledge of same. Said notices shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Contracts, Purchasing & Materials Management Division

J. Primary Insurance:

All liability policies shall contain a Primary and Non-Contributory Clause. Any other insurance maintained by OC San shall be excess and not contributing with the insurance provided by the CONSULTANT.

K. Separation of Insured:

All liability policies shall contain a "Separation of Insureds" clause.

L. Non-Limiting (if applicable):

Nothing in this document shall be construed as limiting in any way, nor shall it limit the indemnification provision contained in this Agreement or the extent to which the CONSULTANT may be held responsible for payment of damages to persons or property.

M. Deductibles and Self-Insured Retentions:

Any deductible and/or self-insured retention must be declared to OC San on the Certificate of Insurance. All deductibles and/or self-insured retentions require acceptance by OC San. At the option of OC San, either: a) the insurer shall reduce or eliminate such deductible or self-insured retention as respects OC San or b) the CONSULTANT shall provide a financial guarantee satisfactory to OC San guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

N. Defense Costs:

Liability policies shall have a provision that defense costs for all insureds and additional insureds are paid in addition to and do not deplete any policy limits.

O. Subconsultants/Subcontractors:

The CONSULTANT shall be responsible to establish insurance requirements for Subconsultants/Subcontractors hired by the CONSULTANT. The insurance shall be in

amounts and types reasonably sufficient to deal with the risk of loss involving the Subconsultants'/Subcontractors' operations and work.

P. Limits Are Minimums:

If the CONSULTANT maintains higher limits than any minimums shown above, then OC San requires and shall be entitled to coverage for the higher limits maintained by the CONSULTANT.

SECTION 9. PROJECT TEAM AND SUBCONSULTANTS

CONSULTANT shall provide to OC San, prior to execution of a Task Order, the names and full descriptions of all Subconsultants/Subcontractors and CONSULTANT's project team members anticipated to be used in performing work under a Task Order. In its proposal, CONSULTANT shall include a description of the work and services to be performed by each Subconsultant/Subcontractor and each of CONSULTANT's project team members. CONSULTANT shall include the respective compensation amounts for CONSULTANT and each Subconsultant/Subcontractor broken down as indicated in Section 4 – COMPENSATION, above.

There shall be no substitution of the listed Subconsultants/Subcontractors and CONSULTANT's project team members without prior written approval by OC San.

SECTION 10. ENGINEERING REGISTRATION

The CONSULTANT's personnel and its Subconsultants/Subcontractors shall be comprised of registered engineers and a staff of specialists and draftsmen in each department. The firm itself is not a registered engineer but represents and agrees that when the performance of this Agreement requires the services of a registered engineer, such services hereunder will be performed under the direct supervision of registered engineers who are registered in the State of California.

SECTION 11. AUDIT PROVISIONS

- A. OC San retains the reasonable right to access, review, examine, and audit any and all books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify that the CONSULTANT is in compliance with all the requirements under this Agreement. The CONSULTANT shall include OC San's right as described above in any and all of their subcontracts and shall ensure that these rights are binding upon all its Subconsultants/Subcontractors.
- B. OC San retains the right to examine CONSULTANT's books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify all direct and indirect costs, of whatever nature, which are claimed to have been incurred, or anticipated to be incurred, or to ensure CONSULTANT's compliance with all the requirements under this Agreement during the term of this Agreement and for a period of three (3) years after expiration or earlier termination of the Agreement.

- C. The CONSULTANT shall maintain complete and accurate records in accordance with generally accepted industry standard practices and OC San's policy. The CONSULTANT shall make available to OC San for review and audit all project-related accounting records and documents and any other financial data within fifteen (15) days after receipt of notice from OC San. Upon OC San's request, the CONSULTANT shall submit exact duplicates of originals of all requested records to OC San. If an audit is performed, the CONSULTANT shall ensure that a qualified employee of the CONSULTANT will be available to assist OC San's auditor in obtaining all project related accounting records and documents and any other financial data.

SECTION 12. LEGAL RELATIONSHIP BETWEEN PARTIES

The legal relationship between the Parties is that of an independent contractor and nothing herein shall be deemed to transform the CONSULTANT, its staff, independent contractors, or its Subconsultants/Subcontractors, into agents or employees of OC San and shall obtain no rights to any benefits which accrue to OC San's employees. CONSULTANT's staff performing services under the Agreement shall at all times be employees and/or independent contractors of the CONSULTANT. The CONSULTANT shall monitor and control its staff and wages, salaries, and other amounts due directly to its staff in connection with the Agreement. The CONSULTANT shall be responsible for hiring, review, and termination of its staff and shall be accountable for all reports and obligations respecting them, such as social security, income tax withholding, unemployment compensation, workers' compensation insurance, and similar matters.

SECTION 13. NOTICES

All notices hereunder and communications regarding the interpretation of the terms of this Agreement, or changes thereto, shall be effected by delivery of said notices in person or by depositing said notices in the U.S. mail, registered or certified mail, return receipt requested, postage prepaid.

Notice shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Ludwig Lapus, Principal Contracts Administrator
Copy: Daniel Berokoff, Engineering Supervisor

Notice shall be mailed to CONSULTANT at:

GHD Inc.
320 Goddard Way, Suite 200
Irvine, CA 92618
Attention: Robin Onkka

All communication regarding the Task Order will be addressed to the Project Manager. Direction from other OC San staff must be approved in writing by OC San's Project Manager prior to action from the CONSULTANT.

SECTION 14. TERMINATION

OC San may terminate this Agreement at any time, without cause, upon giving thirty (30) days written notice to the CONSULTANT. In the event of such termination, the CONSULTANT shall be entitled to compensation for work performed on a prorated basis through and including the effective date of termination.

The CONSULTANT shall be permitted to terminate this Agreement upon thirty (30) days written notice only if the CONSULTANT is not compensated for billed amounts in accordance with the provisions of this Agreement when the same are due. Notice of termination shall be mailed to OC San at the address listed in Section 13 – NOTICES, above.

SECTION 15. COMPLIANCE

The CONSULTANT certifies by the execution of this Agreement that it pays employees not less than the minimum wage as defined by law and that it does not discriminate in its employment with regard to race, color, religion, sex, or national origin; that it is in compliance with all Federal, State, and local directives and executive orders regarding non-discrimination in employment; and that it agrees to demonstrate positively and aggressively the principle of equal opportunity in employment.

The CONSULTANT shall comply with all applicable laws, ordinances, codes, and regulations of Federal, State, and local government in all aspects related to this Agreement and any work completed for OC San.

SECTION 16. AGREEMENT EXECUTION AUTHORIZATION

Both OC San and the CONSULTANT do covenant that each individual executing this document by and on behalf of each Party is a person duly authorized to execute this Agreement for that Party.

SECTION 17. DISPUTE RESOLUTION

In the event of a dispute arising between the Parties regarding performance or interpretation of this Agreement, the dispute shall be resolved by binding arbitration under the auspices of the Judicial Arbitration and Mediation Service (“JAMS”), or similar organization or entity conducting alternate dispute resolution services.

SECTION 18. ATTORNEY’S FEES, COSTS, AND NECESSARY DISBURSEMENTS

If any action at law or inequity or if any proceeding in the form of an Alternative Dispute Resolution is necessary to enforce or interpret the terms of this Agreement, the prevailing Party shall be entitled to reasonable attorney’s fees, costs and necessary disbursements in addition to any other relief to which it may be entitled.

SECTION 19. WARRANTY

The services shall be performed in a manner consistent with the level of care and skill ordinarily exercised by members of CONSULTANT's profession practicing in the same discipline and locality under similar circumstances. If, within the 12-month period following completion of its services, OC San informs the CONSULTANT that any part of the services

fails to meet those standards, the CONSULTANT shall, within the time prescribed by OC San, take all such actions as are necessary to correct or complete the noted deficiency(ies).

SECTION 20. INDEMNIFICATION

To the fullest extent permitted by law, the CONSULTANT shall indemnify, defend (at the CONSULTANT's sole cost and expense and with legal counsel approved by OC San, which approval shall not be unreasonably withheld), protect and hold harmless OC San and all of OC San's officers, directors, employees, consultants, and agents (collectively the "Indemnified Parties"), from and against any and all claims, damages, liabilities, causes of action, suits, arbitration awards, losses, judgments, fines, penalties, costs, and expenses (including, without limitation, attorneys' fees, disbursements and court costs, and all other professional, expert, or CONSULTANT's fees and costs, and OC San's general and administrative expenses) individually, a "Claim" and collectively, "Claims", which may arise from or are in any manner related, directly or indirectly, to any work performed or any operations, activities, or services provided by the CONSULTANT in carrying out its obligations under this Agreement to the extent of the negligent, recklessness, and/or willful misconduct of the CONSULTANT, its principals, officers, agents, employees, CONSULTANT's suppliers, Subconsultants, Subcontractors, and/or anyone employed directly or indirectly by any of them, regardless of any contributing negligence or strict liability of an Indemnified Party. Notwithstanding the foregoing, nothing herein shall be construed to require the CONSULTANT to indemnify the Indemnified Parties from any Claim arising solely from:

- (A) the active negligence or willful misconduct of the Indemnified Parties; or
- (B) a natural disaster or other act of God, such as an earthquake; or
- (C) the independent action of a third party who is neither one of the Indemnified Parties nor the CONSULTANT, nor its principal, officer, agent, employee, nor the CONSULTANT's supplier, Subconsultant, Subcontractor, nor anyone employed directly or indirectly by any of them.

Exceptions (A) through (B) above shall not apply, and the CONSULTANT shall, to the fullest extent permitted by law, indemnify the Indemnified Parties from Claims arising from more than one cause if any such cause taken alone would otherwise result in the obligation to indemnify hereunder.

The CONSULTANT's liability for indemnification hereunder is in addition to any liability the CONSULTANT may have to OC San for a breach by the CONSULTANT of any of the provisions of this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit the CONSULTANT's indemnification obligation or other liability hereunder. The terms of this Agreement are contractual and the result of negotiation between the Parties. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code section 1654) that ambiguities are to be construed against the drafting Party shall not be employed in the interpretation of this Agreement.

SECTION 21. DUTY TO DEFEND

The duty to defend hereunder is wholly independent of and separate from the duty to indemnify and such duty to defend shall exist regardless of any ultimate liability of the CONSULTANT and

shall be consistent with Civil Code section 2782.8. Such defense obligation shall arise immediately upon presentation of a Claim by any person if, without regard to the merit of the Claim, such Claim could potentially result in an obligation to indemnify one or more Indemnified Parties and upon written notice of such Claim being provided to the CONSULTANT. Payment to the CONSULTANT by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition precedent to enforcing such Indemnified Party's rights to indemnification hereunder. In the event a final judgment, arbitration, award, order, settlement, or other final resolution expressly determines that the Claim did not arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONSULTANT, to any extent, then OC San will reimburse the CONSULTANT for the reasonable costs of defending the Indemnified Parties against such Claims.

The CONSULTANT's indemnification obligation hereunder shall survive the expiration or earlier termination of this Agreement until such time as action against the Indemnified Parties for such matter indemnified hereunder is fully and finally barred by the applicable statute of limitations.

SECTION 22. COMPLIANCE WITH OC SAN POLICIES AND PROCEDURES

The CONSULTANT shall be required to comply with all OC San policies and procedures. OC San requires the CONSULTANT and its Subconsultants/Subcontractors to follow and ensure their employees follow all Federal, State, and local regulations as well as OC San's safety standards while working at OC San locations. If during the course of the contract it is discovered that OC San's safety standards do not comply with Federal, State, or local regulations, then the CONSULTANT is required to follow the most stringent regulatory requirement at no additional cost to OC San. The CONSULTANT and all of its employees and Subconsultants/Subcontractors shall adhere to all applicable Contractor Safety Standards attached hereto as Attachment "L".

SECTION 23. GOVERNING LAW

This Agreement shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in Orange County in the event any action is brought in connection with this Agreement or the performance thereof.

SECTION 24. TIME OF ESSENCE

Time is of the essence in the performance of this Agreement.

SECTION 25. CONFLICT OF INTEREST

The CONSULTANT covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of the services contemplated by this Agreement. No person having such interest shall be employed by or associated with the CONSULTANT.

SECTION 26. ENTIRE AGREEMENT

This Agreement constitutes the entire understanding and agreement between the Parties and supersedes all previous negotiations between them pertaining to the subject matter hereof.

IN WITNESS WHEREOF, this Agreement has been executed in the name of OC San and the CONSULTANT by their respective duly authorized officers, as of the date first written above.

GHD INC.

By _____ Date _____

Printed Name & Title

ORANGE COUNTY SANITATION DISTRICT

By _____ Date _____
Chad P. Wanke
Board Chairman

By _____ Date _____
Kelly A. Lore
Clerk of the Board

By _____ Date _____
Ruth Zintzun
Finance & Procurement Manager

Attachments: Attachment "A" Sample Scope of Work
Attachment "B" Not Used
Attachment "C" Not Used
Attachment "D" Allowable Direct Costs
Attachment "E" Rates Proposal
Attachment "F" Not Used
Attachment "G" Not Used
Attachment "H" Not Used
Attachment "I" Not Used
Attachment "J" Not Used
Attachment "K" Not Used
Attachment "L" Contractor Safety Standards
Attachment "M" Iran Contracting Act Verification

ATTACHMENT “A”

SAMPLE SCOPE OF WORK

ATTACHMENT "A"

SAMPLE SCOPE OF WORK DESCRIPTION

OC SAN staff will develop detailed scope of work to be included in each Request for Task Order Proposal (RFTOP). The RFTOP will require Consultants to base their proposals on the scope of work included in the RFTOP. The remainder of this document are the templates typically used for design projects. Notes to scope editor are shown, although they will be removed before a scope of work is included in a RFTOP. Yellow highlighted text indicates where project specific information or a hypothetical example is given.

Design Task Order

Attachment A - Scope of Work

1 PROJECT REQUIREMENTS

Provide professional design engineering services for the project described herein.

1.1 BACKGROUND

- A. The Secondary Clarifiers at Plant No. 1 were constructed under Project Nos. P1-16 (1973), P1-36-2 (1995), and P1-82 (2005). A buried ductile iron plant water line around the secondary clarifiers feeds the scum sprayers and hose bibs. Because the plant water chemical composition is so corrosive to ductile iron, many failures have occurred.

1.2 GENERAL PROJECT DESCRIPTION

- A. This project includes the replacement of approximately 1800 feet of existing 6-inch ductile iron buried plant water piping, valves, fittings, and connections.
- B. A location map is provided in **Figure 1**.

[insert location map]

Figure 1 - Project Location Map

1.3 PROJECT ELEMENTS

- A. **Element 1: Piping** – Replace the existing 1,800 feet of 6-inch buried ductile iron plant water piping with new 6-inch plant water piping.
- B. Assumptions for level of effort:
1. 1,600 feet of piping shall be below grade and 200 feet shall be either above or below grade.
 - a. 1,600 feet of piping is located around the Secondary Clarifiers. Assume high-density polyethylene (HDPE) as the pipe material with appropriate dimension ratio value.
 - b. 200 feet of piping will re-route the existing plant water line on the northwest end of the Secondary Clarifiers. Recent projects disconnected the existing plant water line at various locations resulting in an incomplete loop. This piping will reconnect the lines to allow for a complete loop. See Exhibit 13.1 for photos and Exhibit 13.3 for proposed routing design.
 - (1) For above grade pipe material, assume cement-lined ductile iron or fiberglass-reinforced plastic.
 2. Follow existing alignment with new pipe. New alignments shall be kept as close to the existing alignment as feasible.
 - a. The Secondary Effluent Junction Box No. 4 (SEJB-4), located at the southwest corner of the Secondary Clarifiers, is congested with various utilities, such as plant water, secondary effluent, and reclaimed water lines, and associated valves. Follow the existing alignment in this important area.
 - b. Concrete encasement of HDPE, located on the west side of the Secondary Clarifiers on Fuentes Road, was installed under project P1-102 (2006). Assume potholing is necessary to survey the edge of the concrete and confirm the limits of the existing concrete encasement

do not interfere with this project. As much as possible, the new alignment shall avoid the concrete encasement.

1.4 PROJECT SCHEDULE

- A. **Table 1** lists major project deliverables along with Orange County Sanitation District's (OC SAN) review and approval periods. CONSULTANT shall comply with the deadlines indicated in that table. OC SAN will consider an alternative CONSULTANT proposed schedule provided it is consistent with OC SAN resources, schedule constraints, and adds value. The negotiated durations will set the design baseline schedule.

Table 1 – Project Milestones and Deadlines

MILESTONE	DEADLINE
Kickoff Meeting	The kickoff meeting will be scheduled to coincide with the Project Notice to Proceed (NTP).
Preliminary Design Memo (PDM)	[XX] workdays from Preliminary Design Phase NTP.
OC SAN Review of PDM	10 workdays from receipt of PDM.
Submit Design Submittal 3 (DS3)	[YY] workdays from approval of PDM.
OC SAN Review of DS3	15 workdays from receipt of DS3.
Submit Final Design Submittal (FDS)	15 workdays from receipt of OC SAN comments on DS3.
OC SAN Review of FDS	10 workdays from receipt of FDS.
Submit Final Technical Plans and Specifications (FTPS)	15 workdays from receipt of OC SAN comments on FDS.
Total	[ZZZ] workdays

1.5 PROJECT MANAGEMENT

- A. CONSULTANT shall be responsible for managing CONSULTANT's project execution, schedule, budget, subconsultants, and coordination with other projects.
- B. Per **Exhibit 18**, PMWeb will be used for the management of this agreement.
- C. [Monthly Progress Report: Submit monthly progress reports at the same time as monthly invoices that include the following contents:
1. Work activities completed to date, in the current reporting period, and projected for the coming month.
 2. A brief description of outstanding issues and potential cost, schedule, quality impacts.
 3. Potential changes in the project scope or design scope.
 4. Any corrective actions needed to avoid potential impacts.
 5. Budget status: actual costs to date, costs to complete, and costs at completion.
 6. Schedule status: variances between scheduled and forecasted milestone dates.]
- D. Monthly Invoices: Provide a monthly cost report and/or invoices, which shall document the man-hours and billing rate for each person that works on the project, and shall include the following:
1. Budget
 2. Current billing period invoicing
 3. Previous billing period "total invoiced to date"
 4. Budget Amount Remaining
 5. Current billing period "total percent invoiced to date"

1.6 QUALITY CONTROL

- A. Provide Quality Assurance and Quality Control of the work.
- B. Provide documentation upon request that the CONSULTANT has performed a quality control review in-house, and all the comments have been addressed prior to providing any submittals to OC SAN.

1.7 PROJECT MEETINGS

- A. CONSULTANT shall communicate throughout the project to keep OC SAN apprised of the job, review work-in-progress, share information, discuss project submittals, present findings of technical analyses, receive and resolve comments, and obtain decisions and direction by OC SAN staff.
 - 1. **Table 2** below lists the anticipated meetings and site visits. Microsoft Teams shall be used for meetings. CONSULTANT will provide an agenda 2 workdays prior to each meeting. Meeting minutes will be submitted to the OC SAN project manager for review within 3 workdays of the meeting.

Table 2 – Project Assumed Meetings and Site Visits

DESIGN ACTIVITY	MEETINGS	SITE VISITS
Kickoff Meeting	1 (1-hour)	
PDM	Progress meeting (1-hour, every 2 weeks)	8 hours
PDM Workshop	2 (1-hour)	
DS3	Progress meeting (1-hour, every 2 weeks)	8 hours
DS3 Workshop	2 (1-hour)	
FDS	Progress meeting (1-hour, weekly)	
FDS Workshop	1 (1-hour)	
FTPS	Progress meeting (1-hour, weekly)	
Construction Services	6 hours	24 hours
Closeout	4 hours	12 hours

1.8 SUBMITTAL REVIEWS

- A. Deliverables (other than specifications) shall be submitted in searchable PDF format with no hard copy. Deliverables shall be bookmarked and hyperlinked for navigation per **Exhibit 14**.
- B. OC SAN has standardized on the use of Bluebeam Revu for reviewing and providing comments to PDF files. The purpose of the studio session is to provide review and collaboration. OC SAN staff will create the Bluebeam studio session, invite attendees, configure, and manage the studio session. Make drawing submittals in Bluebeam and respond to OC SAN comments in Bluebeam per **Exhibit 15**.

1.9 SPECIFICATIONS

- A. Prior to preparing or editing specifications, CONSULTANT shall meet with OC SAN staff to determine which OC SAN and CONSULTANT provided specifications should be included in the design. After discussions, all specifications should be loaded in Microsoft Teams (Teams) early in design and prior to editing for DS3.
- B. Tailor all specifications to project and remove requirements that do not apply.
- C. Unless a CONSULTANT is using their own specification management software, Specifications should remain in Teams for editing throughout design. Make all edits to specifications hosted in Teams. Unless agreed to, Specifications should not be removed from Teams or edited elsewhere.
- D. Provide specifications as Microsoft Word (Word) files with Track Changes enabled throughout design.

- E. OC SAN staff will review specifications during submittal review periods. CONSULTANT shall respond to OC SAN comments using Word “Reply” and “Resolve.” CONSULTANT shall “Reply” to each OC SAN comment describing how the comment will be addressed and revise the specification, as needed, to address the comment. “Resolve” will be used by the reviewer or designee to confirm their comment has been addressed. For more information see **Exhibit 16**.
- F. Prior to advertisement, all Word comments and revisions shall be Track Changes accepted, rejected, resolved, or deleted by OC SAN staff prior to bid.

2 PRELIMINARY DESIGN

All significant material and equipment decisions are to be made before the start of Design. At the end Preliminary Design, major design elements shall be fixed, and major equipment, footprints, and utility connection locations shall be well established. The extent of the design and the number and type of drawings shall also be established.

2.1 PRELIMINARY DESIGN AND PDM

- A. The PDM shall consist of a PowerPoint presentation. Present PDM findings and recommendations to OC SAN in a stakeholder meeting using the PowerPoint presentation mentioned in this section for consensus before the start of Design.
- B. Identify any equipment that has one competitive supplier (i.e., sole source). In those cases, recommend an appropriate procurement strategy compatible with California Law and OC SAN policies.
- C. Develop 2 conceptual design alternatives for the plant water piping alignment.
 - 1. Alternatives:
 - a. Reuse exiting alignment and existing points of connection
 - b. Alternate alignment along tunnels in and around secondary clarifiers
 - 2. Perform the following with each alternative:
 - a. Cost, benefit, and life cycle analysis.
 - b. Identify plant water construction shutdown requirements with estimated durations.
 - c. Identify construction access requirements and limitations.
 - d. Prepare preliminary drawings (sketches).
 - 3. Discuss the available alternatives with OC SAN. The PDM shall include the recommendation alternative.
- D. Prepare drawings showing:
 - 1. Proposed alignment of piping
 - 2. Proposed piping materials and quantities
 - 3. Proposed quantity and type of valves and valve cans
 - 4. Proposed connection points which include the following:
 - a. New replacement pipes connecting to existing main plant water line
 - b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
 - 5. Demolition of existing ductile iron pipes and valves
 - 6. Proposed design of new valves and valve cans
 - 7. Proposed design of connection points
 - a. New replacement pipes connecting to existing main plant water lines

- b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
- 8. Proposed design of pipe supports by typical detail and max spacing table
- E. Summarize key constructability and construction sequencing constraints.
 - 1. Develop process flow schematic of the components of the plant water system at Plant No. 1 that impact the pipelines being replaced.
- F. Prepare preliminary construction schedule.
- G. Prepare P&IDs: Fully detailed for each design "module", e.g., 1 pump set typical of all with proposed tagging strategy.
- H. Perform any potholing activities required for the concrete encasement survey specified under Element 1.
- I. Quantify soil contamination by determining the volume of excavation work needed to perform the Work. Coordinate with OC SAN ENGINEER to determine the area of excavation. Soil testing is not necessary.
- J. Develop testing requirements. Assume:
 - 1. Pressure leak and valve testing shall be included.
 - 2. Plant water operating pressure is 110 PSI.

2.2 PRELIMINARY DESIGN CONSTRUCTION COST ESTIMATE

- A. Prepare an AACE International Class 3 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01. Data used to prepare the cost estimate shall be included as an attachment to the PDM.
 - 1. Determine project specific and appropriate values to use for the percentages for profit, bond, and insurance.
 - 2. Costs for project level allowance, insurance, profit, and bond shall be cumulative and listed as individual line items.
 - 3. Allowances or mark ups should be well explained and itemized.
 - a. Include "Market Volatility" allowance of xx%.(revise based on the market conditions)
 - b. Do not setup allowance for change orders.
 - c. Do not escalate to midpoint of construction - this is by OC SAN.
 - 4. Specialty work should be recently (under 6 months) estimated by vendor.
 - a. For example, sewer bypassing services should be estimated by vendor (i.e., Rain 4 Rent).
 - b. Provide vendor quotes for high-cost equipment.
 - c. Minor equipment costs may be documented by written telephone quotations.
 - 5. Provide breakdown of lump sum costs.
 - 6. Show labor rates so they can be checked.
 - 7. Provide all back back up for all documentation obtained for the cost estimate purposes. The cost estimate back up shall have the date and the vendor name/contact name. If catalog price is used, provide the year of that publication.
- B. Prepare estimate of construction duration. The suggested construction duration shall take in considerations the verifiable lead time for all equipment.

3 DESIGN

Prepare biddable plans, technical specifications, other Bid Documents, and any associated design calculations, required to complete the Project Elements.

3.1 DS3 DELIVERABLES

- A. Meet at a 50% completion level with OC SAN staff to review design progress. Formal deliverables are not necessary. QA/QC is also not required for this preview.
- B. At this submittal, the design is essentially finished and submitted as complete. DS3 shall include all finished and checked plans and specifications. OC SAN staff will review DS3 and provide comments to the drawings and specifications. The CONSULTANT should be finished with no remaining design work except for OC SAN comments provided at DS3 review and their incorporation at FDS.
- C. [Prepare construction drawings in CAD conforming to OC SAN's CAD Manual. A CAD compliance check will be performed at DS3 (Exhibit 17, Chapter 8 explains the CAD compliance check, and Appendix D contains the "CAD Standards Compliance Checklist" summarizing all items checked by OC SAN). OC SAN will provide base layers and utilities for Work locations within the treatment plant boundaries.]

3.2 DS3 COST ESTIMATE

- A. Prepare an AACE International Class 2 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01 based on the DS3 design. Data used to prepare the cost estimate shall be included as an attachment to DS3.
- B. Prepare estimate of construction duration.

3.3 FDS DELIVERABLES

- A. Final Design Submittal (FDS) is for OC SAN to confirm all comments from DS3 have been addressed and incorporated and add any additional comments.

3.4 FTSP DOCUMENTS

- A. Final Technical Plans and Specifications is for the CONSULTANT to address and incorporate all comments and provide all necessary stamps and signatures for a complete bid package suitable for advertisement by OC SAN.

3.5 CONSTRUCTION COST ESTIMATE "ENGINEER'S ESTIMATE"

- A. 30 calendar days prior to advertisement, refresh the DS3 Class 2 cost estimate. Get updated vendor quotes used to prepare the DS3 cost estimate. This will become the Engineer's Estimate published in the front-end documents.

3.6 PERMITTING ASSISTANCE ([ALLOCATE 60 HOURS] [NOT INCLUDED IN THIS AGREEMENT])

- A. [For all applicable Project Elements of this Scope of Work, provide Bid Documents that ensure that the design complies with all conditions of existing permits and permits required to construct and implement this project. Testing, construction drawings, specifications, and supplemental drawings shall be prepared, as necessary, in the format required to obtain all permits.]
- B. Assist OC SAN in obtaining permits. This assistance shall include identifying applicable permits, completing required design, plan preparation, application forms provided by OC SAN, preparing supporting documentation for the permit applications as required by the issuing agency, furnishing the required number of copies of all construction drawings and exhibits, and attend meetings with permitting agencies at the request of OC SAN.
- C. Except for construction contractor-furnished permits, OC SAN staff will execute all applications. CONSULTANT shall determine the cost and requirements of all permits. All permit fees will be paid directly by OC SAN and will not be part of CONSULTANT's fee.
- D. Submit all supporting documentation in a timely fashion for all permits required for this project as described below.
 - 1. Caltrans Encroachment Permits

- a. Determine if encroachment permits or other types of permits are required by Caltrans for the design and construction phases. Provide the work necessary to obtain such permits including coordinating and attending meetings.

2. City/County Encroachment Permits

- a. Provide coordination, work effort, and attend meetings, as required, to obtain encroachment permits from each city and agency who has jurisdiction. Process the plans through the cities and agencies for approval, revise plans, and meet with them, as required, to obtain approval.]

3.7 BID SUPPORT SERVICES

- A. Provide answers to bidder's questions related to the design. Provide revisions to specifications and drawings when needed for addendum.
- B. Within 2 weeks of the bid opening date, prepare conformed document set (drawings, databases, specification, and other required materials) that incorporates the addenda. See requirements of OC SAN's CAD Manual.

3.8 POPULATE PMWEB LIST OF SUBMITTALS (ALLOCATE 24 HOURS)

- A. PMWeb is used to manage communication with the contractor. OC SAN uses an Excel template to populate the list of all submittals. The CONSULTANT shall review each project specification and complete the Submittal Items Template as follows:
 1. Enter the list of project specifications.
 2. Enter the list of commissioning packages. Commissioning packages are defined by Section 01810, Commissioning.
 3. Enter the following information for each submittal item.
 - a. Specification section: enter the specification section requiring the submittal.
 - b. Submittal Item description: enter the description of the submittal. Submittal items that refer to multiple specifications shall include referenced specification sections in brackets.
 - c. Comments: enter notes, comments, or clarifications. This field is optional.
 - d. Commissioning package: enter the commissioning package of the submittal item. Submittal items shall be duplicated when the same submittal is required for multiple commissioning packages. Items shall be separated into mobilization, general construction, or a commissioning package defined by the project specifications.
 - e. Phase: Identify which phase each submittal is required to be approved.
 - f. Retention: Specify if the submittal is a Project File or Facility Record based on OC SAN's Records Retention Policy.
 - g. Lead time: Specify the appropriate number of workdays that OC SAN has to review the particular submittal.
 - h. Load: Specify if the submittal should be loaded into PMWeb prior to NTP, upon contractor approval, or prior to the start of commissioning.
- B. OC SAN will provide a PMWeb Master Submittal Items template that includes the submittals required by OC SAN's Master Specifications. The CONSULTANT shall not deviate from the Master PMWeb Submittal Items, except as required by the project specific specifications. The CONSULTANT shall develop submittal items for specifications that are not part of OC SAN's Master Specifications.
- C. OC SAN will provide a 1-hour virtual training on the use of the PMWeb Master Submittal Items Template.
- D. The CONSULTANT shall populate, receive comments, address comments, and provide completed submittal form as follows:
 1. 20 workdays after advertisement date.

3.9 SAFETY AND RISK MEETING

- A. Ensure that an OC San Risk Management safety and security professional has been assigned to the project.
- B. CONSULTANT shall prepare and meet with OC San Risk Management personnel at all design stages to review Exhibit 11 Sample Full Project Safety Review Plan and Exhibit 12 Sample Risk Management Check List. This shall be completed in accordance with Exhibit 4 Risk Management Requirements.
- C. CONSULTANT shall update Exhibits 11 and 12 throughout the design phases. CONSULTANT shall provide OC San Risk Management with the final copies of Exhibit 11 and Exhibit 12 at completion of the Design Project.

4 CONSTRUCTION SERVICES

OC SAN will administer and provide field inspection for construction contracts. Construction and installation support services shall be provided by the CONSULTANT on an as-needed basis and as requested by OC SAN. The services are indicated below.

4.1 SUBMITTAL REVIEWS (ALLOCATE 15 HOURS)

- A. OC SAN will manage submittal review. The CONSULTANT shall use PMWeb to review and return comments to OC SAN. Return comments within 5 workdays.

4.2 REQUESTS FOR INFORMATION (RFIS) (ALLOCATE 15 HOURS)

- A. OC SAN will manage the processing of RFI's. When requested by OC SAN, CONSULTANT shall return written responses to OC SAN within 5 workdays of receipt of RFI using PMWeb. Generate necessary sketches, figures, and modifications to the drawings for clarifications.

4.3 PROGRESS MEETINGS AND SITE VISITS

- A. Refer to **Table 2**.

4.4 RECORD DRAWINGS

- A. Verify that the Contractor's As-Built set correctly reflects the information included in the approved shop drawings, RFIs, approved Field Change Orders, plan clarifications, plan changes, and other deviations from the conformed drawings, and that the information in the set is complete.
- B. Draft Record Drawings shall be submitted to OC SAN within 4 weeks of receipt from OC SAN of the approved Contractor's As-Built drawings. The Final Record Drawings shall be submitted within one week of receipt of OC SAN comments on the Draft Record Drawings.
- C. Prepare Draft Record Drawings based on the Final Field Markup Set for all drawings in accordance with the requirements in the CAD Manual. Submit the Draft Record Drawings to the OC SAN Resident Engineer. The Draft Record Drawings will be reviewed for content and CAD compliance by OC SAN staff. If no comments are identified, CONSULTANT shall prepare the Final Record Drawings and submit them along with the Contractor's field markup set to the Project Manager. For content and placement of record drawing stamp, see CAD Manual.
- D. Submit an electronic copy of the record drawings to OC SAN for review and approval. The acceptance of the record drawings shall be deemed a condition for completion of work.
- E. Contractor-generated drawings described in the Design Guidelines and the shop drawings will not be updated by CONSULTANT. The format and quantities for delivery of the submittals shall be listed below:

Contents	Draft Record Drawings	Final Record Drawings
All related electronic files, including CAD and compiled PDFs.	One copy to be uploaded to Microsoft Teams.	One copy to be uploaded to Microsoft Teams.

4.5 EQUIPMENT INFORMATION DATABASE (EID) (ALLOCATE [X] HOURS [NOT INCLUDED IN THIS AGREEMENT])

- A. OC SAN uses Maximo software to manage and track asset information. When new assets are added or existing assets are modified by a project, an EID Excel spreadsheet is used to populate or update Maximo asset information. CONSULTANT shall meet with OC SAN EIM staff to request an EID spreadsheet pre-populated with the new or modified assets. OC SAN staff will provide training on how to populate the EID spreadsheet. Field work will be needed to apply equipment tags and record equipment nameplate information and serial numbers to populate the EID. Coordinate with Maintenance Specialists (David Haug or designee, Div. 870) to walk new facilities to verify accuracy of P&IDs and EID.

4.6 [UPDATE BASELINE DRAWINGS]

5 STAFF ASSISTANCE

OC SAN staff member or designee assigned to work with CONSULTANT on the design of this project is Jessica Cheung. Phone (714) 593-7147, e-mail jcheung@ocsan.gov.

6 EXHIBITS

- A. Exhibits 1-3, 5-10 – Not Used
- B. Exhibit 4 – Risk Management Requirements
- C. Exhibit 11 – Sample Full Project Safety Review Plan
- D. Exhibit 12 – Sample Risk Management Checklist
- E. Exhibit 13 – Project Reference Material
 - a. 13.1 – Photos
 - b. 13.2 – Plant 1 Plant Water System Map
 - c. 13.3 – Proposed Design Idea (The CONSULTANT may start with this conceptual design.)
 - d. 13.4 – Proposed Valve Cans (The CONSULTANT may start with this conceptual design.)
 - e. 13.5 – Record Drawings (Available Upon Request)
 - (1) P1-82, Activated Sludge Plant Rehabilitation (2005)
 - (2) P1-36-2, Secondary Treatment Improvements at Plant No. 1 (1995)
 - (3) P1-16, 46 MGD Activated Sludge Plant at Reclamation Plant No. 1 (1973)
 - (4) P1-102, Secondary Activated Sludge Facility 2 at Plant No.1 (2006)
- F. Exhibit 14 – BlueBeam Designer Training for Submission
- G. Exhibit 15 – BlueBeam Designer User Training
- H. Exhibit 16 – Spec Review using Microsoft Word and Teams
- I. Exhibit 17 – [CAD Standard Manual](#)
- J. Exhibit 18 – PMWeb

JC:tk

PROFESSIONAL DESIGN SERVICES AGREEMENT

This PROFESSIONAL DESIGN SERVICES AGREEMENT (Agreement), to be effective this 1st day of July, 2024, is made and entered into by and between:

ORANGE COUNTY SANITATION DISTRICT
hereinafter referred to as "OC San"

AND

HAZEN AND SAWYER
hereinafter referred to as "CONSULTANT"

individually referred to as the "Party" and collectively as the "Parties".

RECITALS

WHEREAS, in accordance with Ordinance No. OC SAN-61 and pursuant to a Request for Qualifications ("Underlying RFQ"), the Board of Directors of OC San, by action on May 22, 2024, approved the award of the Agreement for **CONTRACT NO. FE24-00-07**, to CONSULTANT to provide services for selected projects on a task order (Task Order) basis from July 1, 2024 to June 30, 2027; and

WHEREAS, consistent with the Underlying RFQ, the CONSULTANT has been prequalified to perform services for the following project types: Project Type 1: Site Works, Building and Safety, Project Type 2: Linear and Collections, and Project Type 3: Process, Electrical and Instrumentation & Control (I&C); and

WHEREAS, for Task Orders estimated to cost \$100,000 or less, the Director of Engineering, with concurrence of the Purchasing Manager, may solicit a proposal from one (1) firm on the prequalified list, which will include the project types for which the consultants are prequalified; and

WHEREAS, the CONSULTANT is qualified to provide and has agreed to provide the necessary professional engineering and related services under this Agreement; and

WHEREAS, by this Agreement, the Parties intend to set forth the general terms and conditions that will apply to any specific project for which CONSULTANT is given a Task Order by OC San.

NOW, THEREFORE, OC San and the CONSULTANT mutually agree as follows:

SECTION 1. SCOPE OF AGREEMENT

OC San, at its sole discretion, may, from time to time during the term of this Agreement, issue a Request for Task Order Proposal ("RFTOP") setting forth the detailed requirements and scope of work to be performed on the identified project and thereafter, upon receipt of a proposal from the CONSULTANT, may issue a Task Order to proceed with the work. The scope of work will be in a form attached hereto as Attachment "A" – Sample Scope of Work.

Upon execution by OC San, the Task Order shall become an operative part of this Agreement. Should any conflict or inconsistency exist in the contract documents identified in this section, the conflict or inconsistency shall be resolved by applying the provisions in the highest priority document, which shall be determined in the following order of priority:

1. Agreement and any amendments thereto
2. the Task Order
3. the RFTOP

SECTION 2. TASK ORDER ISSUANCE BY OC SAN

The Task Order issued by OC San shall, specifically or by reference to the RFTOP and corresponding proposal, set forth the terms that will apply to the specific project for which the services will be rendered. Those terms shall include, but not be limited to, scope of work, time for performance, and compensation.

SECTION 3. TERM

This Agreement shall commence on the effective date of this Agreement and terminate on June 30, 2027, unless further extended by written agreement signed by the Parties. Any work that is required by a Task Order and is not finished by the date of termination shall be continued and completed by the CONSULTANT and the terms and conditions of this Agreement shall continue in effect for that time. OC San may, at its option, renew this Agreement for two (2) additional terms of one (1) year each, for a maximum contract duration of five (5) years.

SECTION 4. COMPENSATION

The total compensation payable to the CONSULTANT pursuant to this Agreement shall not exceed One Million Dollars (\$1,000,000) per year in accordance with the terms described in SECTION 3 - TERM. The compensation includes, but is not limited to, fees for professional engineering services based on the CONSULTANT's burdened labor rates, overhead, and profit, and fees from the CONSULTANT's subconsultants/subcontractors (Subconsultants/Subcontractors). The specific amount of compensation payable to the CONSULTANT for services rendered on an individual project, pursuant to a Task Order, shall be established for each Task Order and shall not exceed Five Hundred Thousand Dollars (\$500,000) per individual Task Order unless authorized by OC San's Board of Directors. The CONSULTANT agrees and acknowledges that the execution of this Agreement does not in any way guarantee that a Task Order will be issued to the CONSULTANT. Moreover, execution of this Agreement shall not entitle the CONSULTANT to any form of payment or compensation from OC San without OC San first having issued a written Task Order.

A. Total Compensation

Total compensation for any Task Order shall not exceed the amount indicated in the approved Task Order and any approved amendments thereto.

B. Labor

As a portion of the total compensation to be paid to CONSULTANT, OC San shall pay to CONSULTANT a sum equal to the burdened salaries (salaries plus benefits) actually paid

by CONSULTANT charged on an hourly-rate basis to the project and paid to CONSULTANT's personnel. For each Task Order, the cost of benefits for CONSULTANT shall be based on the fringe rates identified in Attachment "E" – Rates Proposal. Upon request of OC San, CONSULTANT shall provide OC San with certified payroll records of all employees' work that is charged to the project.

C. Overhead

As a portion of the total compensation to be paid to CONSULTANT, for each Task Order, OC San shall compensate CONSULTANT for overhead at the rates equal to the percentage of burdened labor as specified in Attachment "E" – Rates Proposal.

D. Profit

For each Task Order, profit shall be ten percent (10%) of burdened labor and overhead for all CONSULTANT fees and its Major Subconsultants (Architecture & Engineering [A&E] consulting services) whose fees for services are greater than or equal to \$100,000. Profit shall remain fixed through the term of this Agreement, inclusive of any renewals identified in Section 3 – TERM.

As a portion of the total compensation to be paid to CONSULTANT and its Major Subconsultants, OC San shall pay profit for all services rendered by CONSULTANT and its Major Subconsultants for the Task Order as specified in the previous paragraph.

E. Subconsultants

For each Task Order, any Minor Subconsultant (A&E consulting services) whose fees for services are less than \$100,000 and any Subconsultant/Subcontractor (non-A&E consulting services), CONSULTANT shall pay to Subconsultant/Subcontractor total compensation based on an established hourly rate schedule by personnel classification. The hourly rates shall cover burdened salary costs, overhead and profit. The compensation for each Minor Subconsultants and Subconsultants/Subcontractors (non-A&E consulting services), including both labor related fees, and direct costs shall not exceed the amount, as negotiated prior to award of a Task Order.

For each Task Order, any Major Subconsultant (A&E consulting services) whose fees for services are greater than or equal to \$100,000, total compensation for labor will be based on burdened labor rates, overhead, and profit, as negotiated prior to award of Task Order. Prior to award of Task Order, the CONSULTANT shall provide to OC San, if available, an audit performed for another public agency which documents the Major Subconsultant's labor burden rate and overhead rate. This audit shall be the most current available and have been conducted for a period that ended within twelve months of the task order proposal due date. This information shall be provided by CONSULTANT within ten (10) business days from request by OC San.

F. Direct Costs

OC San shall reimburse CONSULTANT and its Subconsultants/Subcontractors the actual costs of permits and associated fees, travel, licenses, and other services in an amount not to exceed the sums set forth in each approved Task Order. OC San shall also pay to CONSULTANT actual costs for equipment rentals, leases or purchases with prior written

approval of OC San. Upon request, CONSULTANT shall provide to OC San receipts and other documentary records to support CONSULTANT's request for reimbursement of these amounts, refer to Attachment "D" – Allowable Direct Costs. All incidental expenses shall be included in the overhead cost pursuant to this SECTION 4 – COMPENSATION.

G. Other Direct Costs

OC San will reimburse the CONSULTANT for Other Direct Costs incurred by CONSULTANT and its Subconsultants/Subcontractors due to modifications in the scope of work resulting from field investigations and field work required by the Task Order. These items may include special equipment, test equipment and tooling, and other materials and services not previously identified. Refer to Attachment "D" – Allowable Direct Costs for payment information.

H. Reimbursable Direct Costs

OC San will reimburse the CONSULTANT for reasonable travel and business expenses as described in this section and further described in Attachment "D" – Allowable Direct Costs. The reimbursement of the above-mentioned expenses will be based on an "accountable plan" as considered by the Internal Revenue Service (IRS). The plan includes a combination of reimbursements based upon receipts and a "per diem" component approved by the IRS. The most recent schedule of the per diem rates utilized by OC San may be found on the U.S. General Services Administration website at <https://www.gsa.gov/travel/plan-book/per-diem-rates>.

The CONSULTANT shall be responsible for the most economical and practical means of management of reimbursable costs inclusive, but not limited to, travel, lodging, and meals arrangements. OC San shall apply the most economic and practical method of reimbursement which may include reimbursements based upon receipts and/or "per diem" as deemed the most practical.

CONSULTANT shall be responsible for returning to OC San any excess reimbursements after the reimbursement has been paid by OC San.

Travel and travel arrangements – Any travel involving airfare, overnight stays, or multiple day attendance must be approved by OC San in advance.

Local travel is considered travel by the CONSULTANT within OC San general geographical area which includes Orange, Los Angeles, Ventura, San Bernardino, Riverside, San Diego, Imperial, and Kern Counties. Automobile mileage is reimbursable if CONSULTANT is required to utilize a personal vehicle for local travel.

Lodging – Overnight stays will not be approved by OC San for local travel. However, under certain circumstances overnight stay may be allowed at the discretion of OC San based on reasonableness of meeting schedules and the amount of time required for travel by the CONSULTANT. Such determination will be made on a case-by-case basis and at the discretion of OC San.

Travel Meals – Per diem rates as approved by the IRS shall be utilized for travel meals reimbursements. Per diem rates shall be applied to meals that are appropriate for travel times. Receipts are not required for the approved meals.

Additional details related to the reimbursement of the allowable direct costs are provided in Attachment "D" – Allowable Direct Costs.

I. Limitation of Costs

If, at any time, CONSULTANT estimates the cost of performing the services described in CONSULTANT's proposal will exceed seventy-five percent (75%) of the not to exceed amount of the Task Order, including any approved additional compensation, CONSULTANT shall notify OC San immediately, in writing. The written notice shall indicate the additional amount necessary to complete the services. Any cost incurred in excess of the approved not to exceed amount, without the express written consent of OC San's authorized representative, shall be at CONSULTANT's own risk. This written notice shall be provided separately from, and in addition to, any notification requirements contained in the CONSULTANT's invoice and monthly progress report. Failure to notify OC San that the services cannot be completed within the authorized not to exceed amount of a Task Order is a material breach of this Agreement.

J. Method of Payment:

The CONSULTANT shall submit for approval by OC San, monthly invoices based on the total services which have been satisfactorily completed and specifying a percentage of completion. The CONSULTANT's billings shall be certified for payment by OC San only after OC San has determined that the CONSULTANT has completed each applicable project task.

CONSULTANT shall submit separate invoices for each Task Order on a monthly basis.

CONSULTANT understands that submitted costs are subject to Section 11 - AUDIT PROVISIONS, below.

K. Task Order Completion

Upon satisfactory completion by CONSULTANT of the work called for under the terms of the Task Order and upon acceptance of such work by OC San, CONSULTANT will be paid the unpaid balance of any money due for such work.

Upon satisfactory completion of the work performed under each Task Order and prior to final payment under each Task Order for such work or prior settlement upon termination of this Agreement, and as a condition precedent thereto, CONSULTANT shall execute and deliver to OC San a release of all claims against OC San arising under or by virtue of this Agreement other than such claims, if any, as may be specifically exempted by CONSULTANT from the operation of the release in stated amounts to be set forth therein.

L. False Claims

Pursuant to the California False Claims Act (Government Code Sections 12650-12655), any CONSULTANT that knowingly submits a false claim to OC San for compensation under the terms of this Agreement may be held liable for treble damages and up to a Ten Thousand Dollars (\$10,000) civil penalty for each false claim submitted. This section shall also be binding on all Subconsultants/Subcontractors.

The CONSULTANT or its Subconsultants/Subcontractors shall be deemed to have submitted a false claim when the CONSULTANT or its Subconsultants/Subcontractors: (a) knowingly presents or causes to be presented to an officer or employee of OC San a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by OC San; (c) conspires to defraud OC San by getting a false claim allowed or paid by OC San; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to OC San; or (e) is a beneficiary of an inadvertent submission of a false claim to OC San and fails to disclose the false claim to OC San within a reasonable time after discovery of the false claim.

M. California Department of Industrial Relations (DIR) Registration and Record of Wages:

To the extent the CONSULTANT's employees and/or its Subconsultants/Subcontractors who will perform work during the design, preconstruction, and construction phases of a construction contract for which Prevailing Wage Determinations have been issued by the DIR and as more specifically defined under Labor Code Section 1720 et seq., CONSULTANT and its Subconsultants/Subcontractors shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4, the work is subject to compliance monitoring and enforcement by the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776 and shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Penalties for non-compliance with the requirements of Labor Code section 1776 may be deducted from progress payments per Labor Code section 1776.

Pursuant to Labor Code section 1776, the CONSULTANT and its Subconsultants/Subcontractors shall furnish a copy of all certified payroll records to OC San and/or general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 16461(e).

N. Record of Expenses:

The CONSULTANT shall keep complete and accurate records of all costs and expenses incidental to services covered by this Agreement. Such records will be made available to OC San upon request.

O. Reallocation of Total Compensation:

OC San, by its Director of Engineering, shall have the right to approve a reallocation of the incremental amounts constituting the total compensation payable under the Task Order, provided that the total compensation for the Task Order is not increased.

SECTION 5. LIMITATIONS UPON SUBCONTRACTING AND ASSIGNMENT

The CONSULTANT shall not contract with any other person or entity to perform the services required without the written approval of OC San. This Agreement may not be assigned voluntarily or by operation of law without the prior written approval of OC San. If the CONSULTANT is permitted to subcontract any part of this Agreement by OC San, the CONSULTANT shall be responsible to OC San for the acts and omissions of its Subconsultant/Subcontractor, as it is for persons directly employed by the CONSULTANT. Nothing contained in this Agreement shall create any contractual relationship between any Subconsultant/Subcontractor and OC San. All persons engaged in the work will be considered employees of the CONSULTANT. OC San will deal directly with and will make all payments to the CONSULTANT.

SECTION 6. CHANGES TO SCOPE OF WORK

In the event of a change in the scope of work as requested by OC San or any other changes to the Task Order, the Parties shall execute an amendment to the Task Order setting forth with particularity all new terms of the Task Order, including, but not limited to, any additional compensation.

SECTION 7. DOCUMENT OWNERSHIP – CONSULTANT PERFORMANCE

- A. All documents in all forms (electronic, paper, etc.), including, but not limited to, studies, sketches, drawings, computer printouts, disk files, and electronic copies prepared in connection with or related to the scope of work shall be the property of OC San. OC San's ownership of these documents includes use of, reproduction or reuse of, and all incidental rights, whether or not the work for which they were prepared has been performed. OC San's ownership entitlement arises upon payment or any partial payment for work performed and includes ownership of any and all work product completed prior to that payment. This section shall apply whether the CONSULTANT's services are satisfied by the completion of the Agreement or are terminated in accordance with other provisions of this Agreement. Notwithstanding any other provision of this section or Agreement, the CONSULTANT shall have the right to make copies of all such plans, studies, sketches, drawings, computer printouts and disk files, and specifications.
- B. CONSULTANT shall not be responsible for damage caused by subsequent changes to or uses of the deliverables where the subsequent changes or uses are not authorized or approved by CONSULTANT, provided that the service rendered by CONSULTANT was not a proximate cause of the damage.
- C. Copies of Work Product

Upon completion of the work required for each Task Order, the CONSULTANT shall deliver to OC San the number of copies specified in the specific Task Order scope of work of the final report containing the CONSULTANT's findings, conclusions, recommendations, and all supporting documentation and/or final design drawings and specifications. Each Task Order will define the requirements for the deliverables.

SECTION 8. INSURANCE

A. General:

- i. Insurance shall be issued and underwritten by insurance companies acceptable to OC San.
- ii. Insurers must have an "A-" Policyholder's Rating, or better, and Financial Rating of at least Class VIII, or better, in accordance with the most current A.M. Best's Guide Rating. However, OC San will accept State Compensation Insurance Fund for the required policy of Worker's Compensation Insurance subject to OC San's option to require a change in insurer in the event the State Fund financial rating is decreased below "B". Further, OC San will require CONSULTANT to substitute any insurer whose rating drops below the levels herein specified. Said substitution shall occur within twenty (20) days of written notice to CONSULTANT by OC San or its agent.
- iii. Coverage shall be in effect prior to the commencement of any work under this Agreement.

B. General Liability:

The CONSULTANT shall maintain during the life of this Agreement, including the period of warranty, Commercial General Liability Insurance written on an occurrence basis providing the following minimum limits of liability coverage: Two Million Dollars (\$2,000,000) per occurrence with Four Million Dollars (\$4,000,000) aggregate. If aggregate limits apply separately to this Agreement (as evidenced by submission of ISO form CG 25 03 or CG 25 04), then the aggregate limit may be equivalent to the per occurrence limit. Said insurance shall include coverage for the following hazards: Premises-Operations, blanket contractual liability (for this Agreement), products liability/completed operations (including any product manufactured or assembled), broad form property damage, blanket contractual liability, independent contractors liability, personal and advertising injury, mobile equipment, owners and contractors protective liability, and cross liability and severability of interest clauses. A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement(s). If requested by OC San and applicable, XCU coverage (Explosion, Collapse and Underground) and Riggers/On Hook Liability must be included in the General Liability policy and coverage must be reflected on the submitted Certificate of Insurance.

C. Umbrella Excess Liability:

The minimum limits of general liability and automobile liability insurance required, as set forth herein, shall be provided for through either a single policy of primary insurance or a combination of policies of primary and umbrella excess coverage. Umbrella excess liability coverage shall be issued with limits of liability which, when combined with the primary insurance, will equal the minimum limits for general liability and automobile liability.

D. Automobile/Vehicle Liability Insurance:

The CONSULTANT shall maintain a policy of automobile liability insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and

other vehicles providing the following minimum limit of liability coverage: combined single limit of One Million Dollars (\$1,000,000). A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement.

E. Drone Liability Insurance:

If a drone will be used, drone liability insurance must be maintained by the CONSULTANT in the amount of One Million Dollars (\$1,000,000) in a form acceptable to OC San.

F. Worker's Compensation Insurance:

The CONSULTANT shall provide such Workers' Compensation Insurance as required by the Labor Code of the State of California in the amount of the statutory limit, including Employer's Liability Insurance with a minimum limit of One Million Dollars (\$1,000,000) per occurrence. Such Worker's Compensation Insurance shall be endorsed to provide for a waiver of subrogation in favor of OC San. A statement on an insurance certificate will not be accepted in lieu of the actual endorsements unless the insurance carrier is the State of California Insurance Fund and the identifier "SCIF" and applicable endorsements are referenced on the certificate of insurance. If an exposure to Jones Act liability may exist, the insurance required herein shall include coverage for Jones Act claims.

G. Errors and Omissions/Professional Liability:

The CONSULTANT shall maintain in full force and effect, throughout the term of this Agreement, standard industry form professional liability/errors and omissions insurance coverage with coverage limits of not less than Two Million Dollars (\$2,000,000) in accordance with the provisions of this paragraph. If the policy of insurance is written on a "claims made" basis, said policy shall be continued in full force and effect at all times during the term of this Agreement and for a period of five (5) years from the date of the completion of the services hereunder.

In the event of termination of said policy during this period, the CONSULTANT shall obtain continuing insurance coverage for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement. Said coverage shall be evidenced by either a new policy evidencing no gap in coverage or by separate extended "tail" coverage with the present or new carrier.

In the event the present policy of insurance is written on an "occurrence" basis, said policy shall be continued in full force and effect during the term of this Agreement or until completion of the services provided for in this Agreement, whichever is later. In the event of termination of said policy during this period, new coverage shall be obtained for the required period to insure for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement.

The CONSULTANT shall provide to OC San a certificate of insurance in a form acceptable to OC San indicating the deductible or self-retention amounts and the expiration date of said policy and shall provide renewal certificates not less than ten (10) days prior to the expiration of each policy term.

H. Proof of Coverage:

The CONSULTANT shall furnish OC San with original certificates and amendatory endorsements effecting coverage. Said policies and endorsements shall conform to the requirements herein stated. All certificates and endorsements must be received and accepted by OC San before work commences. OC San reserves the right to require, at any time, complete, certified copies of all required insurance policies, including endorsements, effecting the coverage required. The following are approved forms that must be submitted as proof of coverage:

- | | |
|--|---|
| • Certificate of Insurance | ACORD Form 25 or other equivalent Certificate of Insurance form |
| • Additional Insurance (General Liability) | The combination of (ISO Forms) CG 2010 <u>and</u> CG 2037

All other additional insured endorsements must be submitted for approval by OC San and OC San may reject alternatives that provide different or less coverage to OC San. |
| • Additional Insured (Auto Liability) | Submit Endorsement provided by carrier for OC San's approval. |
| • Waiver of Subrogation | Submit workers' compensation waiver of subrogation endorsement provided by carrier for OC San's approval. |
| • Cancellation Notice | No endorsement is required. However, Vendor/Contractor is responsible for notifying OC San of any pending or actual insurance policy cancellation, as described in Article I. Cancellation and Policy Change Notice below. |

I. Cancellation and Policy Change Notice:

The CONSULTANT is required to notify OC San in writing of any insurance cancellation notice it receives or other knowledge of pending or actual insurance policy cancellation, within two (2) working days of receipt of such notice or acquisition of such knowledge. Additionally, the CONSULTANT is required to notify OC San in writing of any change in the terms of insurance, including reduction in coverage or increase in deductible/SIR, within two (2) working days of receipt of such notice or knowledge of same.

Said notices shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Contracts, Purchasing & Materials Management Division

J. Primary Insurance:

All liability policies shall contain a Primary and Non-Contributory Clause. Any other insurance maintained by OC San shall be excess and not contributing with the insurance provided by the CONSULTANT.

K. Separation of Insured:

All liability policies shall contain a "Separation of Insureds" clause.

L. Non-Limiting (if applicable):

Nothing in this document shall be construed as limiting in any way, nor shall it limit the indemnification provision contained in this Agreement or the extent to which the CONSULTANT may be held responsible for payment of damages to persons or property.

M. Deductibles and Self-Insured Retentions:

Any deductible and/or self-insured retention must be declared to OC San on the Certificate of Insurance. All deductibles and/or self-insured retentions require acceptance by OC San. At the option of OC San, either: a) the insurer shall reduce or eliminate such deductible or self-insured retention as respects OC San or b) the CONSULTANT shall provide a financial guarantee satisfactory to OC San guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

N. Defense Costs:

Liability policies shall have a provision that defense costs for all insureds and additional insureds are paid in addition to and do not deplete any policy limits.

O. Subconsultants/Subcontractors:

The CONSULTANT shall be responsible to establish insurance requirements for Subconsultants/Subcontractors hired by the CONSULTANT. The insurance shall be in amounts and types reasonably sufficient to deal with the risk of loss involving the Subconsultants'/Subcontractors' operations and work.

P. Limits Are Minimums:

If the CONSULTANT maintains higher limits than any minimums shown above, then OC San requires and shall be entitled to coverage for the higher limits maintained by the CONSULTANT.

SECTION 9. PROJECT TEAM AND SUBCONSULTANTS

CONSULTANT shall provide to OC San, prior to execution of a Task Order, the names and full descriptions of all Subconsultants/Subcontractors and CONSULTANT's project team members anticipated to be used in performing work under a Task Order. In its proposal, CONSULTANT shall include a description of the work and services to be performed by

each Subconsultant/Subcontractor and each of CONSULTANT's project team members. CONSULTANT shall include the respective compensation amounts for CONSULTANT and each Subconsultant/Subcontractor broken down as indicated in Section 4 – COMPENSATION, above.

There shall be no substitution of the listed Subconsultants/Subcontractors and CONSULTANT's project team members without prior written approval by OC San.

SECTION 10. ENGINEERING REGISTRATION

The CONSULTANT's personnel and its Subconsultants/Subcontractors shall be comprised of registered engineers and a staff of specialists and draftsmen in each department. The firm itself is not a registered engineer but represents and agrees that when the performance of this Agreement requires the services of a registered engineer, such services hereunder will be performed under the direct supervision of registered engineers who are registered in the State of California.

SECTION 11. AUDIT PROVISIONS

- A. OC San retains the reasonable right to access, review, examine, and audit any and all books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify that the CONSULTANT is in compliance with all the requirements under this Agreement. The CONSULTANT shall include OC San's right as described above in any and all of their subcontracts and shall ensure that these rights are binding upon all its Subconsultants/Subcontractors.
- B. OC San retains the right to examine CONSULTANT's books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify all direct and indirect costs, of whatever nature, which are claimed to have been incurred, or anticipated to be incurred, or to ensure CONSULTANT's compliance with all the requirements under this Agreement during the term of this Agreement and for a period of three (3) years after expiration or earlier termination of the Agreement.
- C. The CONSULTANT shall maintain complete and accurate records in accordance with generally accepted industry standard practices and OC San's policy. The CONSULTANT shall make available to OC San for review and audit all project-related accounting records and documents and any other financial data within fifteen (15) days after receipt of notice from OC San. Upon OC San's request, the CONSULTANT shall submit exact duplicates of originals of all requested records to OC San. If an audit is performed, the CONSULTANT shall ensure that a qualified employee of the CONSULTANT will be available to assist OC San's auditor in obtaining all project related accounting records and documents and any other financial data.

SECTION 12. LEGAL RELATIONSHIP BETWEEN PARTIES

The legal relationship between the Parties is that of an independent contractor and nothing herein shall be deemed to transform the CONSULTANT, its staff, independent contractors, or its Subconsultants/Subcontractors, into agents or employees of OC San and shall obtain no rights to any benefits which accrue to OC San's employees. CONSULTANT's staff performing services under the Agreement shall at all times be employees and/or independent contractors

of the CONSULTANT. The CONSULTANT shall monitor and control its staff and wages, salaries, and other amounts due directly to its staff in connection with the Agreement. The CONSULTANT shall be responsible for hiring, review, and termination of its staff and shall be accountable for all reports and obligations respecting them, such as social security, income tax withholding, unemployment compensation, workers' compensation insurance, and similar matters.

SECTION 13. NOTICES

All notices hereunder and communications regarding the interpretation of the terms of this Agreement, or changes thereto, shall be effected by delivery of said notices in person or by depositing said notices in the U.S. mail, registered or certified mail, return receipt requested, postage prepaid.

Notice shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue, Fountain Valley, CA 92708
Attention: Ludwig Lapus, Principal Contracts Administrator
Copy: Daniel Berokoff, Engineering Supervisor

Notice shall be mailed to CONSULTANT at:

Hazen and Sawyer
7700 Irvine Center Drive, Suite 200
Irvine, CA 92618
Attention: Norm Bradley

All communication regarding the Task Order will be addressed to the Project Manager. Direction from other OC San staff must be approved in writing by OC San's Project Manager prior to action from the CONSULTANT.

SECTION 14. TERMINATION

OC San may terminate this Agreement at any time, without cause, upon giving thirty (30) days written notice to the CONSULTANT. In the event of such termination, the CONSULTANT shall be entitled to compensation for work performed on a prorated basis through and including the effective date of termination.

The CONSULTANT shall be permitted to terminate this Agreement upon thirty (30) days written notice only if the CONSULTANT is not compensated for billed amounts in accordance with the provisions of this Agreement when the same are due. Notice of termination shall be mailed to OC San at the address listed in Section 13 – NOTICES, above.

SECTION 15. COMPLIANCE

The CONSULTANT certifies by the execution of this Agreement that it pays employees not less than the minimum wage as defined by law and that it does not discriminate in its employment with regard to race, color, religion, sex, or national origin; that it is in compliance with all Federal, State, and local directives and executive orders regarding non-discrimination in employment; and that it agrees to demonstrate positively and aggressively the principle of equal opportunity in employment.

The CONSULTANT shall comply with all applicable laws, ordinances, codes, and regulations of Federal, State, and local government in all aspects related to this Agreement and any work completed for OC San.

SECTION 16. AGREEMENT EXECUTION AUTHORIZATION

Both OC San and the CONSULTANT do covenant that each individual executing this document by and on behalf of each Party is a person duly authorized to execute this Agreement for that Party.

SECTION 17. DISPUTE RESOLUTION

In the event of a dispute arising between the Parties regarding performance or interpretation of this Agreement, the dispute shall be resolved by binding arbitration under the auspices of the Judicial Arbitration and Mediation Service ("JAMS"), or similar organization or entity conducting alternate dispute resolution services.

SECTION 18. ATTORNEY'S FEES, COSTS, AND NECESSARY DISBURSEMENTS

If any action at law or inequity or if any proceeding in the form of an Alternative Dispute Resolution is necessary to enforce or interpret the terms of this Agreement, the prevailing Party shall be entitled to reasonable attorney's fees, costs and necessary disbursements in addition to any other relief to which it may be entitled.

SECTION 19. WARRANTY

CONSULTANT shall perform its services in accordance with generally accepted industry and professional standards. If, within the 12-month period following completion of its services, OC San informs the CONSULTANT that any part of the services fails to meet those standards, the CONSULTANT shall, within the time prescribed by OC San, take all such actions as are necessary to correct or complete the noted deficiency(ies).

SECTION 20. INDEMNIFICATION

To the fullest extent permitted by law, the CONSULTANT shall indemnify, defend (at the CONSULTANT's sole cost and expense and with legal counsel approved by OC San, which approval shall not be unreasonably withheld), protect and hold harmless OC San and all of OC San's officers, directors, employees, consultants, and agents (collectively the "Indemnified Parties"), from and against any and all claims, damages, liabilities, causes of action, suits, arbitration awards, losses, judgments, fines, penalties, costs, and expenses (including, without limitation, attorneys' fees, disbursements and court costs, and all other professional, expert, or CONSULTANT's fees and costs, and OC San's general and administrative expenses) individually, a "Claim" and collectively, "Claims", which may arise from or are in any manner related, directly or indirectly, to any work performed or any operations, activities, or services provided by the CONSULTANT in carrying out its obligations under this Agreement to the extent of the negligent, recklessness, and/or willful misconduct of the CONSULTANT, its principals, officers, agents, employees, CONSULTANT's suppliers, Subconsultants, Subcontractors, and/or anyone employed directly or indirectly by any of them, regardless of any contributing negligence or strict

liability of an Indemnified Party. Notwithstanding the foregoing, nothing herein shall be construed to require the CONSULTANT to indemnify the Indemnified Parties from any Claim arising solely from:

- (A) the active negligence or willful misconduct of the Indemnified Parties; or
- (B) a natural disaster or other act of God, such as an earthquake; or
- (C) the independent action of a third party who is neither one of the Indemnified Parties nor the CONSULTANT, nor its principal, officer, agent, employee, nor the CONSULTANT's supplier, Subconsultant, Subcontractor, nor anyone employed directly or indirectly by any of them.

Exceptions (A) through (B) above shall not apply, and the CONSULTANT shall, to the fullest extent permitted by law, indemnify the Indemnified Parties from Claims arising from more than one cause if any such cause taken alone would otherwise result in the obligation to indemnify hereunder.

The CONSULTANT's liability for indemnification hereunder is in addition to any liability the CONSULTANT may have to OC San for a breach by the CONSULTANT of any of the provisions of this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit the CONSULTANT's indemnification obligation or other liability hereunder. The terms of this Agreement are contractual and the result of negotiation between the Parties. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code section 1654) that ambiguities are to be construed against the drafting Party shall not be employed in the interpretation of this Agreement.

SECTION 21. DUTY TO DEFEND

The duty to defend hereunder is wholly independent of and separate from the duty to indemnify and such duty to defend shall exist regardless of any ultimate liability of the CONSULTANT and shall be consistent with Civil Code section 2782.8. Such defense obligation shall arise immediately upon presentation of a Claim by any person if, without regard to the merit of the Claim, such Claim could potentially result in an obligation to indemnify one or more Indemnified Parties and upon written notice of such Claim being provided to the CONSULTANT. Payment to the CONSULTANT by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition precedent to enforcing such Indemnified Party's rights to indemnification hereunder. In the event a final judgment, arbitration, award, order, settlement, or other final resolution expressly determines that the Claim did not arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONSULTANT, to any extent, then OC San will reimburse the CONSULTANT for the reasonable costs of defending the Indemnified Parties against such Claims.

The CONSULTANT's indemnification obligation hereunder shall survive the expiration or earlier termination of this Agreement until such time as action against the Indemnified Parties for such matter indemnified hereunder is fully and finally barred by the applicable statute of limitations.

SECTION 22. COMPLIANCE WITH OC SAN POLICIES AND PROCEDURES

The CONSULTANT shall be required to comply with all OC San policies and procedures. OC San requires the CONSULTANT and its Subconsultants/Subcontractors to follow and ensure their employees follow all Federal, State, and local regulations as well as OC San's safety standards while working at OC San locations. If during the course of the contract it is discovered that OC San's safety standards do not comply with Federal, State, or local regulations, then the CONSULTANT is required to follow the most stringent regulatory requirement at no additional cost to OC San. The CONSULTANT and all of its employees and Subconsultants/Subcontractors shall adhere to all applicable Contractor Safety Standards attached hereto as Attachment "L".

SECTION 23. GOVERNING LAW

This Agreement shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in Orange County in the event any action is brought in connection with this Agreement or the performance thereof.

SECTION 24. TIME OF ESSENCE

Time is of the essence in the performance of this Agreement.

SECTION 25. CONFLICT OF INTEREST

The CONSULTANT covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of the services contemplated by this Agreement. No person having such interest shall be employed by or associated with the CONSULTANT.

SECTION 26. ENTIRE AGREEMENT

This Agreement constitutes the entire understanding and agreement between the Parties and supersedes all previous negotiations between them pertaining to the subject matter hereof.

[THIS SECTION INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, this Agreement has been executed in the name of OC San and the CONSULTANT by their respective duly authorized officers, as of the date first written above.

HAZEN AND SAWYER

By _____ Date _____

Printed Name & Title

ORANGE COUNTY SANITATION DISTRICT

By _____ Date _____
Chad P. Wanke
Board Chairman

By _____ Date _____
Kelly A. Lore
Clerk of the Board

By _____ Date _____
Ruth Zintzun
Finance & Procurement Manager

Attachments: Attachment "A" Sample Scope of Work
Attachment "B" Not Used
Attachment "C" Not Used
Attachment "D" Allowable Direct Costs
Attachment "E" Rates Proposal
Attachment "F" Not Used
Attachment "G" Not Used
Attachment "H" Not Used
Attachment "I" Not Used
Attachment "J" Not Used
Attachment "K" Not Used
Attachment "L" Contractor Safety Standards
Attachment "M" Iran Contracting Act Verification

ATTACHMENT “A”

SAMPLE SCOPE OF WORK

ATTACHMENT "A"

SAMPLE SCOPE OF WORK DESCRIPTION

OC SAN staff will develop detailed scope of work to be included in each Request for Task Order Proposal (RFTOP). The RFTOP will require Consultants to base their proposals on the scope of work included in the RFTOP. The remainder of this document are the templates typically used for design projects. Notes to scope editor are shown, although they will be removed before a scope of work is included in a RFTOP. Yellow highlighted text indicates where project specific information or a hypothetical example is given.

Design Task Order

Attachment A - Scope of Work

1 PROJECT REQUIREMENTS

Provide professional design engineering services for the project described herein.

1.1 BACKGROUND

- A. The Secondary Clarifiers at Plant No. 1 were constructed under Project Nos. P1-16 (1973), P1-36-2 (1995), and P1-82 (2005). A buried ductile iron plant water line around the secondary clarifiers feeds the scum sprayers and hose bibs. Because the plant water chemical composition is so corrosive to ductile iron, many failures have occurred.

1.2 GENERAL PROJECT DESCRIPTION

- A. This project includes the replacement of approximately 1800 feet of existing 6-inch ductile iron buried plant water piping, valves, fittings, and connections.
- B. A location map is provided in **Figure 1**.

[insert location map]

Figure 1 - Project Location Map

1.3 PROJECT ELEMENTS

- A. **Element 1: Piping** – Replace the existing 1,800 feet of 6-inch buried ductile iron plant water piping with new 6-inch plant water piping.
- B. Assumptions for level of effort:
1. 1,600 feet of piping shall be below grade and 200 feet shall be either above or below grade.
 - a. 1,600 feet of piping is located around the Secondary Clarifiers. Assume high-density polyethylene (HDPE) as the pipe material with appropriate dimension ratio value.
 - b. 200 feet of piping will re-route the existing plant water line on the northwest end of the Secondary Clarifiers. Recent projects disconnected the existing plant water line at various locations resulting in an incomplete loop. This piping will reconnect the lines to allow for a complete loop. See Exhibit 13.1 for photos and Exhibit 13.3 for proposed routing design.
 - (1) For above grade pipe material, assume cement-lined ductile iron or fiberglass-reinforced plastic.
 2. Follow existing alignment with new pipe. New alignments shall be kept as close to the existing alignment as feasible.
 - a. The Secondary Effluent Junction Box No. 4 (SEJB-4), located at the southwest corner of the Secondary Clarifiers, is congested with various utilities, such as plant water, secondary effluent, and reclaimed water lines, and associated valves. Follow the existing alignment in this important area.
 - b. Concrete encasement of HDPE, located on the west side of the Secondary Clarifiers on Fuentes Road, was installed under project P1-102 (2006). Assume potholing is necessary to survey the edge of the concrete and confirm the limits of the existing concrete encasement

do not interfere with this project. As much as possible, the new alignment shall avoid the concrete encasement.

1.4 PROJECT SCHEDULE

- A. **Table 1** lists major project deliverables along with Orange County Sanitation District's (OC SAN) review and approval periods. CONSULTANT shall comply with the deadlines indicated in that table. OC SAN will consider an alternative CONSULTANT proposed schedule provided it is consistent with OC SAN resources, schedule constraints, and adds value. The negotiated durations will set the design baseline schedule.

Table 1 – Project Milestones and Deadlines

MILESTONE	DEADLINE
Kickoff Meeting	The kickoff meeting will be scheduled to coincide with the Project Notice to Proceed (NTP).
Preliminary Design Memo (PDM)	[XX] workdays from Preliminary Design Phase NTP.
OC SAN Review of PDM	10 workdays from receipt of PDM.
Submit Design Submittal 3 (DS3)	[YY] workdays from approval of PDM.
OC SAN Review of DS3	15 workdays from receipt of DS3.
Submit Final Design Submittal (FDS)	15 workdays from receipt of OC SAN comments on DS3.
OC SAN Review of FDS	10 workdays from receipt of FDS.
Submit Final Technical Plans and Specifications (FTPS)	15 workdays from receipt of OC SAN comments on FDS.
Total	[ZZZ] workdays

1.5 PROJECT MANAGEMENT

- A. CONSULTANT shall be responsible for managing CONSULTANT's project execution, schedule, budget, subconsultants, and coordination with other projects.
- B. Per **Exhibit 18**, PMWeb will be used for the management of this agreement.
- C. [Monthly Progress Report: Submit monthly progress reports at the same time as monthly invoices that include the following contents:
1. Work activities completed to date, in the current reporting period, and projected for the coming month.
 2. A brief description of outstanding issues and potential cost, schedule, quality impacts.
 3. Potential changes in the project scope or design scope.
 4. Any corrective actions needed to avoid potential impacts.
 5. Budget status: actual costs to date, costs to complete, and costs at completion.
 6. Schedule status: variances between scheduled and forecasted milestone dates.]
- D. Monthly Invoices: Provide a monthly cost report and/or invoices, which shall document the man-hours and billing rate for each person that works on the project, and shall include the following:
1. Budget
 2. Current billing period invoicing
 3. Previous billing period "total invoiced to date"
 4. Budget Amount Remaining
 5. Current billing period "total percent invoiced to date"

1.6 QUALITY CONTROL

- A. Provide Quality Assurance and Quality Control of the work.
- B. Provide documentation upon request that the CONSULTANT has performed a quality control review in-house, and all the comments have been addressed prior to providing any submittals to OC SAN.

1.7 PROJECT MEETINGS

- A. CONSULTANT shall communicate throughout the project to keep OC SAN apprised of the job, review work-in-progress, share information, discuss project submittals, present findings of technical analyses, receive and resolve comments, and obtain decisions and direction by OC SAN staff.
 - 1. **Table 2** below lists the anticipated meetings and site visits. Microsoft Teams shall be used for meetings. CONSULTANT will provide an agenda 2 workdays prior to each meeting. Meeting minutes will be submitted to the OC SAN project manager for review within 3 workdays of the meeting.

Table 2 – Project Assumed Meetings and Site Visits

DESIGN ACTIVITY	MEETINGS	SITE VISITS
Kickoff Meeting	1 (1-hour)	
PDM	Progress meeting (1-hour, every 2 weeks)	8 hours
PDM Workshop	2 (1-hour)	
DS3	Progress meeting (1-hour, every 2 weeks)	8 hours
DS3 Workshop	2 (1-hour)	
FDS	Progress meeting (1-hour, weekly)	
FDS Workshop	1 (1-hour)	
FTPS	Progress meeting (1-hour, weekly)	
Construction Services	6 hours	24 hours
Closeout	4 hours	12 hours

1.8 SUBMITTAL REVIEWS

- A. Deliverables (other than specifications) shall be submitted in searchable PDF format with no hard copy. Deliverables shall be bookmarked and hyperlinked for navigation per **Exhibit 14**.
- B. OC SAN has standardized on the use of Bluebeam Revu for reviewing and providing comments to PDF files. The purpose of the studio session is to provide review and collaboration. OC SAN staff will create the Bluebeam studio session, invite attendees, configure, and manage the studio session. Make drawing submittals in Bluebeam and respond to OC SAN comments in Bluebeam per **Exhibit 15**.

1.9 SPECIFICATIONS

- A. Prior to preparing or editing specifications, CONSULTANT shall meet with OC SAN staff to determine which OC SAN and CONSULTANT provided specifications should be included in the design. After discussions, all specifications should be loaded in Microsoft Teams (Teams) early in design and prior to editing for DS3.
- B. Tailor all specifications to project and remove requirements that do not apply.
- C. Unless a CONSULTANT is using their own specification management software, Specifications should remain in Teams for editing throughout design. Make all edits to specifications hosted in Teams. Unless agreed to, Specifications should not be removed from Teams or edited elsewhere.
- D. Provide specifications as Microsoft Word (Word) files with Track Changes enabled throughout design.

- E. OC SAN staff will review specifications during submittal review periods. CONSULTANT shall respond to OC SAN comments using Word “Reply” and “Resolve.” CONSULTANT shall “Reply” to each OC SAN comment describing how the comment will be addressed and revise the specification, as needed, to address the comment. “Resolve” will be used by the reviewer or designee to confirm their comment has been addressed. For more information see **Exhibit 16**.
- F. Prior to advertisement, all Word comments and revisions shall be Track Changes accepted, rejected, resolved, or deleted by OC SAN staff prior to bid.

2 PRELIMINARY DESIGN

All significant material and equipment decisions are to be made before the start of Design. At the end Preliminary Design, major design elements shall be fixed, and major equipment, footprints, and utility connection locations shall be well established. The extent of the design and the number and type of drawings shall also be established.

2.1 PRELIMINARY DESIGN AND PDM

- A. The PDM shall consist of a PowerPoint presentation. Present PDM findings and recommendations to OC SAN in a stakeholder meeting using the PowerPoint presentation mentioned in this section for consensus before the start of Design.
- B. Identify any equipment that has one competitive supplier (i.e., sole source). In those cases, recommend an appropriate procurement strategy compatible with California Law and OC SAN policies.
- C. Develop 2 conceptual design alternatives for the plant water piping alignment.
 - 1. Alternatives:
 - a. Reuse exiting alignment and existing points of connection
 - b. Alternate alignment along tunnels in and around secondary clarifiers
 - 2. Perform the following with each alternative:
 - a. Cost, benefit, and life cycle analysis.
 - b. Identify plant water construction shutdown requirements with estimated durations.
 - c. Identify construction access requirements and limitations.
 - d. Prepare preliminary drawings (sketches).
 - 3. Discuss the available alternatives with OC SAN. The PDM shall include the recommendation alternative.
- D. Prepare drawings showing:
 - 1. Proposed alignment of piping
 - 2. Proposed piping materials and quantities
 - 3. Proposed quantity and type of valves and valve cans
 - 4. Proposed connection points which include the following:
 - a. New replacement pipes connecting to existing main plant water line
 - b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
 - 5. Demolition of existing ductile iron pipes and valves
 - 6. Proposed design of new valves and valve cans
 - 7. Proposed design of connection points
 - a. New replacement pipes connecting to existing main plant water lines

- b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
- 8. Proposed design of pipe supports by typical detail and max spacing table
- E. Summarize key constructability and construction sequencing constraints.
 - 1. Develop process flow schematic of the components of the plant water system at Plant No. 1 that impact the pipelines being replaced.
- F. Prepare preliminary construction schedule.
- G. Prepare P&IDs: Fully detailed for each design "module", e.g., 1 pump set typical of all with proposed tagging strategy.
- H. Perform any potholing activities required for the concrete encasement survey specified under Element 1.
- I. Quantify soil contamination by determining the volume of excavation work needed to perform the Work. Coordinate with OC SAN ENGINEER to determine the area of excavation. Soil testing is not necessary.
- J. Develop testing requirements. Assume:
 - 1. Pressure leak and valve testing shall be included.
 - 2. Plant water operating pressure is 110 PSI.

2.2 PRELIMINARY DESIGN CONSTRUCTION COST ESTIMATE

- A. Prepare an AACE International Class 3 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01. Data used to prepare the cost estimate shall be included as an attachment to the PDM.
 - 1. Determine project specific and appropriate values to use for the percentages for profit, bond, and insurance.
 - 2. Costs for project level allowance, insurance, profit, and bond shall be cumulative and listed as individual line items.
 - 3. Allowances or mark ups should be well explained and itemized.
 - a. Include "Market Volatility" allowance of xx%.(revise based on the market conditions)
 - b. Do not setup allowance for change orders.
 - c. Do not escalate to midpoint of construction - this is by OC SAN.
 - 4. Specialty work should be recently (under 6 months) estimated by vendor.
 - a. For example, sewer bypassing services should be estimated by vendor (i.e., Rain 4 Rent).
 - b. Provide vendor quotes for high-cost equipment.
 - c. Minor equipment costs may be documented by written telephone quotations.
 - 5. Provide breakdown of lump sum costs.
 - 6. Show labor rates so they can be checked.
 - 7. Provide all back back up for all documentation obtained for the cost estimate purposes. The cost estimate back up shall have the date and the vendor name/contact name. If catalog price is used, provide the year of that publication.
- B. Prepare estimate of construction duration. The suggested construction duration shall take in considerations the verifiable lead time for all equipment.

3 DESIGN

Prepare biddable plans, technical specifications, other Bid Documents, and any associated design calculations, required to complete the Project Elements.

3.1 DS3 DELIVERABLES

- A. Meet at a 50% completion level with OC SAN staff to review design progress. Formal deliverables are not necessary. QA/QC is also not required for this preview.
- B. At this submittal, the design is essentially finished and submitted as complete. DS3 shall include all finished and checked plans and specifications. OC SAN staff will review DS3 and provide comments to the drawings and specifications. The CONSULTANT should be finished with no remaining design work except for OC SAN comments provided at DS3 review and their incorporation at FDS.
- C. [Prepare construction drawings in CAD conforming to OC SAN's CAD Manual. A CAD compliance check will be performed at DS3 (Exhibit 17, Chapter 8 explains the CAD compliance check, and Appendix D contains the "CAD Standards Compliance Checklist" summarizing all items checked by OC SAN). OC SAN will provide base layers and utilities for Work locations within the treatment plant boundaries.]

3.2 DS3 COST ESTIMATE

- A. Prepare an AACE International Class 2 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01 based on the DS3 design. Data used to prepare the cost estimate shall be included as an attachment to DS3.
- B. Prepare estimate of construction duration.

3.3 FDS DELIVERABLES

- A. Final Design Submittal (FDS) is for OC SAN to confirm all comments from DS3 have been addressed and incorporated and add any additional comments.

3.4 FTSP DOCUMENTS

- A. Final Technical Plans and Specifications is for the CONSULTANT to address and incorporate all comments and provide all necessary stamps and signatures for a complete bid package suitable for advertisement by OC SAN.

3.5 CONSTRUCTION COST ESTIMATE "ENGINEER'S ESTIMATE"

- A. 30 calendar days prior to advertisement, refresh the DS3 Class 2 cost estimate. Get updated vendor quotes used to prepare the DS3 cost estimate. This will become the Engineer's Estimate published in the front-end documents.

3.6 PERMITTING ASSISTANCE ([ALLOCATE 60 HOURS] [NOT INCLUDED IN THIS AGREEMENT])

- A. [For all applicable Project Elements of this Scope of Work, provide Bid Documents that ensure that the design complies with all conditions of existing permits and permits required to construct and implement this project. Testing, construction drawings, specifications, and supplemental drawings shall be prepared, as necessary, in the format required to obtain all permits.]
- B. Assist OC SAN in obtaining permits. This assistance shall include identifying applicable permits, completing required design, plan preparation, application forms provided by OC SAN, preparing supporting documentation for the permit applications as required by the issuing agency, furnishing the required number of copies of all construction drawings and exhibits, and attend meetings with permitting agencies at the request of OC SAN.
- C. Except for construction contractor-furnished permits, OC SAN staff will execute all applications. CONSULTANT shall determine the cost and requirements of all permits. All permit fees will be paid directly by OC SAN and will not be part of CONSULTANT's fee.
- D. Submit all supporting documentation in a timely fashion for all permits required for this project as described below.
 - 1. Caltrans Encroachment Permits

- a. Determine if encroachment permits or other types of permits are required by Caltrans for the design and construction phases. Provide the work necessary to obtain such permits including coordinating and attending meetings.

2. City/County Encroachment Permits

- a. Provide coordination, work effort, and attend meetings, as required, to obtain encroachment permits from each city and agency who has jurisdiction. Process the plans through the cities and agencies for approval, revise plans, and meet with them, as required, to obtain approval.]

3.7 BID SUPPORT SERVICES

- A. Provide answers to bidder's questions related to the design. Provide revisions to specifications and drawings when needed for addendum.
- B. Within 2 weeks of the bid opening date, prepare conformed document set (drawings, databases, specification, and other required materials) that incorporates the addenda. See requirements of OC SAN's CAD Manual.

3.8 POPULATE PMWEB LIST OF SUBMITTALS (ALLOCATE 24 HOURS)

- A. PMWeb is used to manage communication with the contractor. OC SAN uses an Excel template to populate the list of all submittals. The CONSULTANT shall review each project specification and complete the Submittal Items Template as follows:
 1. Enter the list of project specifications.
 2. Enter the list of commissioning packages. Commissioning packages are defined by Section 01810, Commissioning.
 3. Enter the following information for each submittal item.
 - a. Specification section: enter the specification section requiring the submittal.
 - b. Submittal Item description: enter the description of the submittal. Submittal items that refer to multiple specifications shall include referenced specification sections in brackets.
 - c. Comments: enter notes, comments, or clarifications. This field is optional.
 - d. Commissioning package: enter the commissioning package of the submittal item. Submittal items shall be duplicated when the same submittal is required for multiple commissioning packages. Items shall be separated into mobilization, general construction, or a commissioning package defined by the project specifications.
 - e. Phase: Identify which phase each submittal is required to be approved.
 - f. Retention: Specify if the submittal is a Project File or Facility Record based on OC SAN's Records Retention Policy.
 - g. Lead time: Specify the appropriate number of workdays that OC SAN has to review the particular submittal.
 - h. Load: Specify if the submittal should be loaded into PMWeb prior to NTP, upon contractor approval, or prior to the start of commissioning.
- B. OC SAN will provide a PMWeb Master Submittal Items template that includes the submittals required by OC SAN's Master Specifications. The CONSULTANT shall not deviate from the Master PMWeb Submittal Items, except as required by the project specific specifications. The CONSULTANT shall develop submittal items for specifications that are not part of OC SAN's Master Specifications.
- C. OC SAN will provide a 1-hour virtual training on the use of the PMWeb Master Submittal Items Template.
- D. The CONSULTANT shall populate, receive comments, address comments, and provide completed submittal form as follows:
 1. 20 workdays after advertisement date.

3.9 SAFETY AND RISK MEETING

- A. Ensure that an OC San Risk Management safety and security professional has been assigned to the project.
- B. CONSULTANT shall prepare and meet with OC San Risk Management personnel at all design stages to review Exhibit 11 Sample Full Project Safety Review Plan and Exhibit 12 Sample Risk Management Check List. This shall be completed in accordance with Exhibit 4 Risk Management Requirements.
- C. CONSULTANT shall update Exhibits 11 and 12 throughout the design phases. CONSULTANT shall provide OC San Risk Management with the final copies of Exhibit 11 and Exhibit 12 at completion of the Design Project.

4 CONSTRUCTION SERVICES

OC SAN will administer and provide field inspection for construction contracts. Construction and installation support services shall be provided by the CONSULTANT on an as-needed basis and as requested by OC SAN. The services are indicated below.

4.1 SUBMITTAL REVIEWS (ALLOCATE 15 HOURS)

- A. OC SAN will manage submittal review. The CONSULTANT shall use PMWeb to review and return comments to OC SAN. Return comments within 5 workdays.

4.2 REQUESTS FOR INFORMATION (RFIS) (ALLOCATE 15 HOURS)

- A. OC SAN will manage the processing of RFI's. When requested by OC SAN, CONSULTANT shall return written responses to OC SAN within 5 workdays of receipt of RFI using PMWeb. Generate necessary sketches, figures, and modifications to the drawings for clarifications.

4.3 PROGRESS MEETINGS AND SITE VISITS

- A. Refer to **Table 2**.

4.4 RECORD DRAWINGS

- A. Verify that the Contractor's As-Built set correctly reflects the information included in the approved shop drawings, RFIs, approved Field Change Orders, plan clarifications, plan changes, and other deviations from the conformed drawings, and that the information in the set is complete.
- B. Draft Record Drawings shall be submitted to OC SAN within 4 weeks of receipt from OC SAN of the approved Contractor's As-Built drawings. The Final Record Drawings shall be submitted within one week of receipt of OC SAN comments on the Draft Record Drawings.
- C. Prepare Draft Record Drawings based on the Final Field Markup Set for all drawings in accordance with the requirements in the CAD Manual. Submit the Draft Record Drawings to the OC SAN Resident Engineer. The Draft Record Drawings will be reviewed for content and CAD compliance by OC SAN staff. If no comments are identified, CONSULTANT shall prepare the Final Record Drawings and submit them along with the Contractor's field markup set to the Project Manager. For content and placement of record drawing stamp, see CAD Manual.
- D. Submit an electronic copy of the record drawings to OC SAN for review and approval. The acceptance of the record drawings shall be deemed a condition for completion of work.
- E. Contractor-generated drawings described in the Design Guidelines and the shop drawings will not be updated by CONSULTANT. The format and quantities for delivery of the submittals shall be listed below:

Contents	Draft Record Drawings	Final Record Drawings
All related electronic files, including CAD and compiled PDFs.	One copy to be uploaded to Microsoft Teams.	One copy to be uploaded to Microsoft Teams.

4.5 EQUIPMENT INFORMATION DATABASE (EID) (ALLOCATE [X] HOURS [NOT INCLUDED IN THIS AGREEMENT])

- A. OC SAN uses Maximo software to manage and track asset information. When new assets are added or existing assets are modified by a project, an EID Excel spreadsheet is used to populate or update Maximo asset information. CONSULTANT shall meet with OC SAN EIM staff to request an EID spreadsheet pre-populated with the new or modified assets. OC SAN staff will provide training on how to populate the EID spreadsheet. Field work will be needed to apply equipment tags and record equipment nameplate information and serial numbers to populate the EID. Coordinate with Maintenance Specialists (David Haug or designee, Div. 870) to walk new facilities to verify accuracy of P&IDs and EID.

4.6 [UPDATE BASELINE DRAWINGS]

5 STAFF ASSISTANCE

OC SAN staff member or designee assigned to work with CONSULTANT on the design of this project is Jessica Cheung. Phone (714) 593-7147, e-mail jcheung@ocsan.gov.

6 EXHIBITS

- A. Exhibits 1-3, 5-10 – Not Used
- B. Exhibit 4 – Risk Management Requirements
- C. Exhibit 11 – Sample Full Project Safety Review Plan
- D. Exhibit 12 – Sample Risk Management Checklist
- E. Exhibit 13 – Project Reference Material
 - a. 13.1 – Photos
 - b. 13.2 – Plant 1 Plant Water System Map
 - c. 13.3 – Proposed Design Idea (The CONSULTANT may start with this conceptual design.)
 - d. 13.4 – Proposed Valve Cans (The CONSULTANT may start with this conceptual design.)
 - e. 13.5 – Record Drawings (Available Upon Request)
 - (1) P1-82, Activated Sludge Plant Rehabilitation (2005)
 - (2) P1-36-2, Secondary Treatment Improvements at Plant No. 1 (1995)
 - (3) P1-16, 46 MGD Activated Sludge Plant at Reclamation Plant No. 1 (1973)
 - (4) P1-102, Secondary Activated Sludge Facility 2 at Plant No.1 (2006)
- F. Exhibit 14 – BlueBeam Designer Training for Submission
- G. Exhibit 15 – BlueBeam Designer User Training
- H. Exhibit 16 – Spec Review using Microsoft Word and Teams
- I. Exhibit 17 – [CAD Standard Manual](#)
- J. Exhibit 18 – PMWeb

JC:tk

PROFESSIONAL DESIGN SERVICES AGREEMENT

This PROFESSIONAL DESIGN SERVICES AGREEMENT (Agreement), to be effective this 1st day of July, 2024, is made and entered into by and between:

ORANGE COUNTY SANITATION DISTRICT
hereinafter referred to as "OC San"

AND

HDR ENGINEERING, INC.
hereinafter referred to as "CONSULTANT"

individually referred to as the "Party" and collectively as the "Parties".

RECITALS

WHEREAS, in accordance with Ordinance No. OC SAN-61 and pursuant to a Request for Qualifications ("Underlying RFQ"), the Board of Directors of OC San, by action on May 22, 2024, approved the award of the Agreement for **CONTRACT NO. FE24-00-08**, to CONSULTANT to provide services for selected projects on a task order (Task Order) basis from July 1, 2024 to June 30, 2027; and

WHEREAS, consistent with the Underlying RFQ, the CONSULTANT has been prequalified to perform services for the following project types: Project Type 1: Site Works, Building and Safety, Project Type 2: Linear and Collections, and Project Type 3: Process, Electrical and Instrumentation & Control (I&C); and

WHEREAS, for Task Orders estimated to cost \$100,000 or less, the Director of Engineering, with concurrence of the Purchasing Manager, may solicit a proposal from one (1) firm on the prequalified list, which will include the project types for which the consultants are prequalified; and

WHEREAS, the CONSULTANT is qualified to provide and has agreed to provide the necessary professional engineering and related services under this Agreement; and

WHEREAS, by this Agreement, the Parties intend to set forth the general terms and conditions that will apply to any specific project for which CONSULTANT is given a Task Order by OC San.

NOW, THEREFORE, OC San and the CONSULTANT mutually agree as follows:

SECTION 1. SCOPE OF AGREEMENT

OC San, at its sole discretion, may, from time to time during the term of this Agreement, issue a Request for Task Order Proposal ("RFTOP") setting forth the detailed requirements and scope of work to be performed on the identified project and thereafter, upon receipt of a proposal from the CONSULTANT, may issue a Task Order to proceed with the work. The scope of work will be in a form attached hereto as Attachment "A" – Sample Scope of Work.

Upon execution by OC San, the Task Order shall become an operative part of this Agreement. Should any conflict or inconsistency exist in the contract documents identified in this section, the conflict or inconsistency shall be resolved by applying the provisions in the highest priority document, which shall be determined in the following order of priority:

1. Agreement and any amendments thereto
2. the Task Order
3. the RFTOP

SECTION 2. TASK ORDER ISSUANCE BY OC SAN

The Task Order issued by OC San shall, specifically or by reference to the RFTOP and corresponding proposal, set forth the terms that will apply to the specific project for which the services will be rendered. Those terms shall include, but not be limited to, scope of work, time for performance, and compensation.

SECTION 3. TERM

This Agreement shall commence on the effective date of this Agreement and terminate on June 30, 2027, unless further extended by written agreement signed by the Parties. Any work that is required by a Task Order and is not finished by the date of termination shall be continued and completed by the CONSULTANT and the terms and conditions of this Agreement shall continue in effect for that time. OC San may, at its option, renew this Agreement for two (2) additional terms of one (1) year each, for a maximum contract duration of five (5) years.

SECTION 4. COMPENSATION

The total compensation payable to the CONSULTANT pursuant to this Agreement shall not exceed One Million Dollars (\$1,000,000) per year in accordance with the terms described in SECTION 3 - TERM. The compensation includes, but is not limited to, fees for professional engineering services based on the CONSULTANT's burdened labor rates, overhead, and profit, and fees from the CONSULTANT's subconsultants/subcontractors (Subconsultants/Subcontractors). The specific amount of compensation payable to the CONSULTANT for services rendered on an individual project, pursuant to a Task Order, shall be established for each Task Order and shall not exceed Five Hundred Thousand Dollars (\$500,000) per individual Task Order unless authorized by OC San's Board of Directors. The CONSULTANT agrees and acknowledges that the execution of this Agreement does not in any way guarantee that a Task Order will be issued to the CONSULTANT. Moreover, execution of this Agreement shall not entitle the CONSULTANT to any form of payment or compensation from OC San without OC San first having issued a written Task Order.

A. Total Compensation

Total compensation for any Task Order shall not exceed the amount indicated in the approved Task Order and any approved amendments thereto.

B. Labor

As a portion of the total compensation to be paid to CONSULTANT, OC San shall pay to CONSULTANT a sum equal to the burdened salaries (salaries plus benefits) actually paid by CONSULTANT charged on an hourly-rate basis to the project and paid to CONSULTANT's personnel. For each Task Order, the cost of benefits for CONSULTANT shall be based on the fringe rates identified in Attachment "E" – Rates Proposal. Upon request of OC San, CONSULTANT shall provide OC San with certified payroll records of all employees' work that is charged to the project.

C. Overhead

As a portion of the total compensation to be paid to CONSULTANT, for each Task Order, OC San shall compensate CONSULTANT for overhead at the rates equal to the percentage of burdened labor as specified in Attachment "E" – Rates Proposal.

D. Profit

For each Task Order, profit shall be ten percent (10%) of burdened labor and overhead for all CONSULTANT fees and its Major Subconsultants (Architecture & Engineering [A&E] consulting services) whose fees for services are greater than or equal to \$100,000. Profit shall remain fixed through the term of this Agreement, inclusive of any renewals identified in Section 3 – TERM.

As a portion of the total compensation to be paid to CONSULTANT and its Major Subconsultants, OC San shall pay profit for all services rendered by CONSULTANT and its Major Subconsultants for the Task Order as specified in the previous paragraph.

E. Subconsultants

For each Task Order, any Minor Subconsultant (A&E consulting services) whose fees for services are less than \$100,000 and any Subconsultant/Subcontractor (non-A&E consulting services), CONSULTANT shall pay to Subconsultant/Subcontractor total compensation based on an established hourly rate schedule by personnel classification. The hourly rates shall cover burdened salary costs, overhead and profit. The compensation for each Minor Subconsultants and Subconsultants/Subcontractors (non-A&E consulting services), including both labor related fees, and direct costs shall not exceed the amount, as negotiated prior to award of a Task Order.

For each Task Order, any Major Subconsultant (A&E consulting services) whose fees for services are greater than or equal to \$100,000, total compensation for labor will be based on burdened labor rates, overhead, and profit, as negotiated prior to award of Task Order. Prior to award of Task Order, the CONSULTANT shall provide to OC San, if available, an audit performed for another public agency which documents the Major Subconsultant's labor burden rate and overhead rate. This audit shall be the most current available and have been conducted for a period that ended within twelve months of the task order proposal due date. This information shall be provided by CONSULTANT within ten (10) business days from request by OC San.

F. Direct Costs

OC San shall reimburse CONSULTANT and its Subconsultants/Subcontractors the actual costs of permits and associated fees, travel, licenses, and other services in an amount not to exceed the sums set forth in each approved Task Order. OC San shall also pay to CONSULTANT actual costs for equipment rentals, leases or purchases with prior written approval of OC San. Upon request, CONSULTANT shall provide to OC San receipts and other documentary records to support CONSULTANT's request for reimbursement of these amounts, refer to Attachment "D" – Allowable Direct Costs. All incidental expenses shall be included in the overhead cost pursuant to this SECTION 4 – COMPENSATION.

G. Other Direct Costs

OC San will reimburse the CONSULTANT for Other Direct Costs incurred by CONSULTANT and its Subconsultants/Subcontractors due to modifications in the scope of work resulting from field investigations and field work required by the Task Order. These items may include special equipment, test equipment and tooling, and other materials and services not previously identified. Refer to Attachment "D" – Allowable Direct Costs for payment information.

H. Reimbursable Direct Costs

OC San will reimburse the CONSULTANT for reasonable travel and business expenses as described in this section and further described in Attachment "D" – Allowable Direct Costs. The reimbursement of the above-mentioned expenses will be based on an "accountable plan" as considered by the Internal Revenue Service (IRS). The plan includes a combination of reimbursements based upon receipts and a "per diem" component approved by the IRS. The most recent schedule of the per diem rates utilized by OC San may be found on the U.S. General Services Administration website at <https://www.gsa.gov/travel/plan-book/per-diem-rates>.

The CONSULTANT shall be responsible for the most economical and practical means of management of reimbursable costs inclusive, but not limited to, travel, lodging, and meals arrangements. OC San shall apply the most economic and practical method of reimbursement which may include reimbursements based upon receipts and/or "per diem" as deemed the most practical.

CONSULTANT shall be responsible for returning to OC San any excess reimbursements after the reimbursement has been paid by OC San.

Travel and travel arrangements – Any travel involving airfare, overnight stays, or multiple day attendance must be approved by OC San in advance.

Local travel is considered travel by the CONSULTANT within OC San general geographical area which includes Orange, Los Angeles, Ventura, San Bernardino, Riverside, San Diego, Imperial, and Kern Counties. Automobile mileage is reimbursable if CONSULTANT is required to utilize a personal vehicle for local travel.

Lodging – Overnight stays will not be approved by OC San for local travel. However, under certain circumstances overnight stay may be allowed at the discretion of OC San based on reasonableness of meeting schedules and the amount of time required for travel by the CONSULTANT. Such determination will be made on a case-by-case basis and at the discretion of OC San.

Travel Meals – Per diem rates as approved by the IRS shall be utilized for travel meals reimbursements. Per diem rates shall be applied to meals that are appropriate for travel times. Receipts are not required for the approved meals.

Additional details related to the reimbursement of the allowable direct costs are provided in Attachment “D” – Allowable Direct Costs.

I. Limitation of Costs

If, at any time, CONSULTANT estimates the cost of performing the services described in CONSULTANT's proposal will exceed seventy-five percent (75%) of the not to exceed amount of the Task Order, including any approved additional compensation, CONSULTANT shall notify OC San immediately, in writing. The written notice shall indicate the additional amount necessary to complete the services. Any cost incurred in excess of the approved not to exceed amount, without the express written consent of OC San's authorized representative, shall be at CONSULTANT's own risk. This written notice shall be provided separately from, and in addition to, any notification requirements contained in the CONSULTANT's invoice and monthly progress report. Failure to notify OC San that the services cannot be completed within the authorized not to exceed amount of a Task Order is a material breach of this Agreement.

J. Method of Payment:

The CONSULTANT shall submit for approval by OC San, monthly invoices based on the total services which have been satisfactorily completed and specifying a percentage of completion. The CONSULTANT's billings shall be certified for payment by OC San only after OC San has determined that the CONSULTANT has completed each applicable project task. OC San will pay all undisputed amounts within thirty (30) days following receipt of CONSULTANT's invoice.

CONSULTANT shall submit separate invoices for each Task Order on a monthly basis.

CONSULTANT understands that submitted costs are subject to Section 11 - AUDIT PROVISIONS, below.

K. Task Order Completion

Upon satisfactory completion by CONSULTANT of the work called for under the terms of the Task Order and upon acceptance of such work by OC San, CONSULTANT will be paid the unpaid balance of any money due for such work.

Upon satisfactory completion of the work performed under each Task Order and prior to final payment under each Task Order for such work or prior settlement upon termination of this Agreement, and as a condition precedent thereto, CONSULTANT shall execute

and deliver to OC San a release of all claims against OC San arising under or by virtue of this Agreement other than such claims, if any, as may be specifically exempted by CONSULTANT from the operation of the release in stated amounts to be set forth therein.

L. False Claims

Pursuant to the California False Claims Act (Government Code Sections 12650-12655), any CONSULTANT that knowingly submits a false claim to OC San for compensation under the terms of this Agreement may be held liable for treble damages and up to a Ten Thousand Dollars (\$10,000) civil penalty for each false claim submitted. This section shall also be binding on all Subconsultants/Subcontractors.

The CONSULTANT or its Subconsultants/Subcontractors shall be deemed to have submitted a false claim when the CONSULTANT or its Subconsultants/Subcontractors: (a) knowingly presents or causes to be presented to an officer or employee of OC San a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by OC San; (c) conspires to defraud OC San by getting a false claim allowed or paid by OC San; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to OC San; or (e) is a beneficiary of an inadvertent submission of a false claim to OC San and fails to disclose the false claim to OC San within a reasonable time after discovery of the false claim.

M. California Department of Industrial Relations (DIR) Registration and Record of Wages:

To the extent the CONSULTANT's employees and/or its Subconsultants/Subcontractors who will perform work during the design, preconstruction, and construction phases of a construction contract for which Prevailing Wage Determinations have been issued by the DIR and as more specifically defined under Labor Code Section 1720 et seq., CONSULTANT and its Subconsultants/Subcontractors shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4, the work is subject to compliance monitoring and enforcement by the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776 and shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Penalties for non-compliance with the requirements of Labor Code section 1776 may be deducted from progress payments per Labor Code section 1776.

Pursuant to Labor Code section 1776, the CONSULTANT and its Subconsultants/Subcontractors shall furnish a copy of all certified payroll records to OC San and/or general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 16461(e).

N. Record of Expenses:

The CONSULTANT shall keep complete and accurate records of all costs and expenses incidental to services covered by this Agreement. Such records will be made available to OC San upon request.

O. Reallocation of Total Compensation:

OC San, by its Director of Engineering, shall have the right to approve a reallocation of the incremental amounts constituting the total compensation payable under the Task Order, provided that the total compensation for the Task Order is not increased.

SECTION 5. LIMITATIONS UPON SUBCONTRACTING AND ASSIGNMENT

The CONSULTANT shall not contract with any other person or entity to perform the services required without the written approval of OC San. This Agreement may not be assigned voluntarily or by operation of law without the prior written approval of OC San. If the CONSULTANT is permitted to subcontract any part of this Agreement by OC San, the CONSULTANT shall be responsible to OC San for the acts and omissions of its Subconsultant/Subcontractor, as it is for persons directly employed by the CONSULTANT. Nothing contained in this Agreement shall create any contractual relationship between any Subconsultant/Subcontractor and OC San. All persons engaged in the work will be considered employees of the CONSULTANT. OC San will deal directly with and will make all payments to the CONSULTANT.

SECTION 6. CHANGES TO SCOPE OF WORK

In the event of a change in the scope of work as requested by OC San or any other changes to the Task Order, the Parties shall execute an amendment to the Task Order setting forth with particularity all new terms of the Task Order, including, but not limited to, any additional compensation.

SECTION 7. DOCUMENT OWNERSHIP – CONSULTANT PERFORMANCE

- A. All documents in all forms (electronic, paper, etc.), including, but not limited to, studies, sketches, drawings, computer printouts, disk files, and electronic copies prepared in connection with or related to the scope of work shall be the property of OC San. OC San's ownership of these documents includes use of, reproduction or reuse of, and all incidental rights, whether or not the work for which they were prepared has been performed. OC San's ownership entitlement arises upon payment or any partial payment for work performed and includes ownership of any and all work product completed prior to that payment. This section shall apply whether the CONSULTANT's services are satisfied by the completion of the Agreement or are terminated in accordance with other provisions of this Agreement. Notwithstanding any other provision of this section or Agreement, the CONSULTANT shall have the right to make copies of all such plans, studies, sketches, drawings, computer printouts and disk files, and specifications.

- B. CONSULTANT shall not be responsible for damage caused by subsequent changes to or uses of the deliverables where the subsequent changes or uses are not authorized or approved by CONSULTANT, provided that the service rendered by CONSULTANT was not a proximate cause of the damage.

- C. Copies of Work Product

Upon completion of the work required for each Task Order, the CONSULTANT shall deliver to OC San the number of copies specified in the specific Task Order scope of work of the final report containing the CONSULTANT's findings, conclusions, recommendations, and all supporting documentation and/or final design drawings and specifications. Each Task Order will define the requirements for the deliverables.

SECTION 8. INSURANCE

- A. General:

- i. Insurance shall be issued and underwritten by insurance companies acceptable to OC San.
- ii. Insurers must have an "A-" Policyholder's Rating, or better, and Financial Rating of at least Class VIII, or better, in accordance with the most current A.M. Best's Guide Rating. However, OC San will accept State Compensation Insurance Fund for the required policy of Worker's Compensation Insurance subject to OC San's option to require a change in insurer in the event the State Fund financial rating is decreased below "B". Further, OC San will require CONSULTANT to substitute any insurer whose rating drops below the levels herein specified. Said substitution shall occur within twenty (20) days of written notice to CONSULTANT by OC San or its agent.
- iii. Coverage shall be in effect prior to the commencement of any work under this Agreement.

- B. General Liability:

The CONSULTANT shall maintain during the life of this Agreement, including the period of warranty, Commercial General Liability Insurance written on an occurrence basis providing the following minimum limits of liability coverage: Two Million Dollars (\$2,000,000) per occurrence with Four Million Dollars (\$4,000,000) aggregate. If aggregate limits apply separately to this Agreement (as evidenced by submission of ISO form CG 25 03 or CG 25 04), then the aggregate limit may be equivalent to the per occurrence limit. Said insurance shall include coverage for the following hazards: Premises-Operations, blanket contractual liability (for this Agreement), products liability/completed operations (including any product manufactured or assembled), broad form property damage, blanket contractual liability, independent contractors liability, personal and advertising injury, mobile equipment, and cross liability and severability of interest clauses. A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement(s). If requested by OC San and applicable, XCU coverage (Explosion, Collapse and Underground) and Riggers/On Hook Liability must be included in the General Liability policy and coverage must be reflected on the submitted Certificate of Insurance.

C. Umbrella Excess Liability:

The minimum limits of general liability and automobile liability insurance required, as set forth herein, shall be provided for through either a single policy of primary insurance or a combination of policies of primary and umbrella excess coverage. Umbrella excess liability coverage shall be issued with limits of liability which, when combined with the primary insurance, will equal the minimum limits for general liability and automobile liability.

D. Automobile/Vehicle Liability Insurance:

The CONSULTANT shall maintain a policy of automobile liability insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and other vehicles providing the following minimum limit of liability coverage: combined single limit of One Million Dollars (\$1,000,000). A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement.

E. Drone Liability Insurance:

If a drone will be used, drone liability insurance must be maintained by the CONSULTANT in the amount of One Million Dollars (\$1,000,000) in a form acceptable to OC San.

F. Worker's Compensation Insurance:

The CONSULTANT shall provide such Workers' Compensation Insurance as required by the Labor Code of the State of California in the amount of the statutory limit, including Employer's Liability Insurance with a minimum limit of One Million Dollars (\$1,000,000) per occurrence. Such Worker's Compensation Insurance shall be endorsed to provide for a waiver of subrogation in favor of OC San. A statement on an insurance certificate will not be accepted in lieu of the actual endorsements unless the insurance carrier is the State of California Insurance Fund and the identifier "SCIF" and applicable endorsements are referenced on the certificate of insurance. If an exposure to Jones Act liability may exist, the insurance required herein shall include coverage for Jones Act claims.

G. Errors and Omissions/Professional Liability:

The CONSULTANT shall maintain in full force and effect, throughout the term of this Agreement, standard industry form professional liability/errors and omissions insurance coverage with coverage limits of not less than Two Million Dollars (\$2,000,000) in accordance with the provisions of this paragraph. If the policy of insurance is written on a "claims made" basis, said policy shall be continued in full force and effect at all times during the term of this Agreement and for a period of five (5) years from the date of the completion of the services hereunder.

In the event of termination of said policy during this period, the CONSULTANT shall obtain continuing insurance coverage for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement. Said coverage shall be evidenced by either a new policy evidencing no gap in coverage or by separate extended "tail" coverage with the present or new carrier.

In the event the present policy of insurance is written on an “occurrence” basis, said policy shall be continued in full force and effect during the term of this Agreement or until completion of the services provided for in this Agreement, whichever is later. In the event of termination of said policy during this period, new coverage shall be obtained for the required period to insure for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement.

The CONSULTANT shall provide to OC San a certificate of insurance in a form acceptable to OC San indicating the deductible or self-retention amounts and the expiration date of said policy and shall provide renewal certificates not less than ten (10) days prior to the expiration of each policy term.

H. Proof of Coverage:

The CONSULTANT shall furnish OC San with original certificates and amendatory endorsements effecting coverage. Said policies and endorsements shall conform to the requirements herein stated. All certificates and endorsements must be received and accepted by OC San before work commences. OC San reserves the right to require where OC SAN is named additionally insured, at any time, redacted copies of all required insurance policies, including endorsements, effecting the coverage required. The following are approved forms that must be submitted as proof of coverage:

- | | |
|--|---|
| • Certificate of Insurance | ACORD Form 25 or other equivalent Certificate of Insurance form |
| • Additional Insurance (General Liability) | The combination of (ISO Forms) CG 2010 <u>and</u> CG 2037

All other additional insured endorsements must be submitted for approval by OC San and OC San may reject alternatives that provide different or less coverage to OC San. |
| • Additional Insured (Auto Liability) | Submit Endorsement provided by carrier for OC San’s approval. |
| • Waiver of Subrogation | Submit workers’ compensation waiver of subrogation endorsement provided by carrier for OC San’s approval. |
| • Cancellation Notice | No endorsement is required. However, Vendor/Contractor is responsible for notifying OC San of any pending or actual insurance policy cancellation, as described in Article I. Cancellation and Policy Change Notice below. |

I. Cancellation and Policy Change Notice:

The CONSULTANT is required to notify OC San in writing of any insurance cancellation notice it receives or other knowledge of pending or actual insurance policy cancellation, within two (2) working days of receipt of such notice or acquisition of such knowledge. Additionally, the CONSULTANT is required to notify OC San in writing of any change in the terms of insurance, including reduction in coverage or increase in deductible/SIR, within two (2) working days of receipt of such notice or knowledge of same.

Said notices shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Contracts, Purchasing & Materials Management Division

J. Primary Insurance:

All liability policies shall contain a Primary and Non-Contributory Clause. Any other insurance maintained by OC San shall be excess and not contributing with the insurance provided by the CONSULTANT.

K. Separation of Insured:

All liability policies shall contain a "Separation of Insureds" clause.

L. Non-Limiting (if applicable):

Nothing in this document shall be construed as limiting in any way, nor shall it limit the indemnification provision contained in this Agreement or the extent to which the CONSULTANT may be held responsible for payment of damages to persons or property.

M. Deductibles and Self-Insured Retentions:

Any deductible and/or self-insured retention must be declared to OC San on the Certificate of Insurance. All deductibles and/or self-insured retentions require acceptance by OC San.

N. Defense Costs:

Liability policies shall have a provision that defense costs for all insureds and additional insureds are paid in addition to and do not deplete any policy limits.

O. Subconsultants/Subcontractors:

The CONSULTANT shall be responsible to establish insurance requirements for Subconsultants/Subcontractors hired by the CONSULTANT. The insurance shall be in amounts and types reasonably sufficient to deal with the risk of loss involving the Subconsultants'/Subcontractors' operations and work.

P. Limits Are Minimums:

If the CONSULTANT maintains higher limits than any minimums shown above, then OC San requires and shall be entitled to coverage for the higher limits maintained by the CONSULTANT.

SECTION 9. PROJECT TEAM AND SUBCONSULTANTS

CONSULTANT shall provide to OC San, prior to execution of a Task Order, the names and full descriptions of all Subconsultants/Subcontractors and CONSULTANT's project team members anticipated to be used in performing work under a Task Order. In its proposal, CONSULTANT shall include a description of the work and services to be performed by each Subconsultant/Subcontractor and each of CONSULTANT's project team members. CONSULTANT shall include the respective compensation amounts for CONSULTANT and each Subconsultant/Subcontractor broken down as indicated in Section 4 – COMPENSATION, above.

There shall be no substitution of the listed Subconsultants/Subcontractors and CONSULTANT's project team members without prior written approval by OC San.

SECTION 10. ENGINEERING REGISTRATION

The CONSULTANT's personnel and its Subconsultants/Subcontractors shall be comprised of registered engineers and a staff of specialists and draftsmen in each department. The firm itself is not a registered engineer but represents and agrees that when the performance of this Agreement requires the services of a registered engineer, such services hereunder will be performed under the direct supervision of registered engineers who are registered in the State of California.

SECTION 11. AUDIT PROVISIONS

- A. OC San retains the reasonable right to access, review, examine, and audit any and all books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify that the CONSULTANT is in compliance with all the requirements under this Agreement. The CONSULTANT shall include OC San's right as described above in any and all of their subcontracts and shall ensure that these rights are binding upon all its Subconsultants/Subcontractors.
- B. OC San retains the right to examine CONSULTANT's books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify all direct and indirect costs, of whatever nature, which are claimed to have been incurred, or anticipated to be incurred, or to ensure CONSULTANT's compliance with all the requirements under this Agreement during the term of this Agreement and for a period of three (3) years after expiration or earlier termination of the Agreement.
- C. The CONSULTANT shall maintain complete and accurate records in accordance with Generally Accepted Accounting Principles (GAAP). The CONSULTANT shall make available to OC San for review and audit all project-related accounting records and documents and any other financial data within fifteen (15) days after receipt of notice

from OC San. Upon OC San's request, the CONSULTANT shall submit exact duplicates of originals of all requested records to OC San. If an audit is performed, the CONSULTANT shall ensure that a qualified employee of the CONSULTANT will be available to assist OC San's auditor in obtaining all project related accounting records and documents and any other financial data.

SECTION 12. LEGAL RELATIONSHIP BETWEEN PARTIES

The legal relationship between the Parties is that of an independent contractor and nothing herein shall be deemed to transform the CONSULTANT, its staff, independent contractors, or its Subconsultants/Subcontractors, into agents or employees of OC San and shall obtain no rights to any benefits which accrue to OC San's employees. CONSULTANT's staff performing services under the Agreement shall at all times be employees and/or independent contractors of the CONSULTANT. The CONSULTANT shall monitor and control its staff and wages, salaries, and other amounts due directly to its staff in connection with the Agreement. The CONSULTANT shall be responsible for hiring, review, and termination of its staff and shall be accountable for all reports and obligations respecting them, such as social security, income tax withholding, unemployment compensation, workers' compensation insurance, and similar matters.

SECTION 13. NOTICES

All notices hereunder and communications regarding the interpretation of the terms of this Agreement, or changes thereto, shall be effected by delivery of said notices in person or by depositing said notices in the U.S. mail, registered or certified mail, return receipt requested, postage prepaid.

Notice shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Ludwig Lopus, Principal Contracts Administrator
Copy: Daniel Berokoff, Engineering Supervisor

Notice shall be mailed to CONSULTANT at:

HDR Engineering, Inc.
3230 El Camino Real, Suite 200
Irvine, CA 92602
Attention: Amy Omae

All communication regarding the Task Order will be addressed to the Project Manager. Direction from other OC San staff must be approved in writing by OC San's Project Manager prior to action from the CONSULTANT.

SECTION 14. TERMINATION

OC San may terminate this Agreement at any time, without cause, upon giving thirty (30) days written notice to the CONSULTANT. In the event of such termination, the CONSULTANT shall be entitled to compensation for work performed on a prorated basis

through and including the effective date of termination. OC SAN may terminate this Agreement for cause but only after providing CONSULTANT written notice of the breach and a period of ten (10) days to cure.

The CONSULTANT shall be permitted to terminate this Agreement upon thirty (30) days written notice only if the CONSULTANT is not compensated for billed amounts in accordance with the provisions of this Agreement when the same are due. Notice of termination shall be mailed to OC San at the address listed in Section 13 – NOTICES, above.

SECTION 15. COMPLIANCE

The CONSULTANT certifies by the execution of this Agreement that it pays employees not less than the minimum wage as defined by law and that it does not discriminate in its employment with regard to race, color, religion, sex, or national origin; that it is in compliance with all Federal, State, and local directives and executive orders regarding non-discrimination in employment; and that it agrees to demonstrate positively and aggressively the principle of equal opportunity in employment.

The CONSULTANT shall comply with all applicable laws, ordinances, codes, and regulations of Federal, State, and local government in all aspects related to this Agreement and any work completed for OC San.

SECTION 16. AGREEMENT EXECUTION AUTHORIZATION

Both OC San and the CONSULTANT do covenant that each individual executing this document by and on behalf of each Party is a person duly authorized to execute this Agreement for that Party.

SECTION 17. DISPUTE RESOLUTION

In the event of a dispute arising between the Parties regarding performance or interpretation of this Agreement, the dispute shall be resolved by binding arbitration under the auspices of the Judicial Arbitration and Mediation Service (“JAMS”), or similar organization or entity conducting alternate dispute resolution services.

SECTION 18. ATTORNEY’S FEES, COSTS, AND NECESSARY DISBURSEMENTS

If any action at law or inequity or if any proceeding in the form of an Alternative Dispute Resolution is necessary to enforce or interpret the terms of this Agreement, the prevailing Party shall be entitled to reasonable attorney’s fees, costs and necessary disbursements in addition to any other relief to which it may be entitled.

SECTION 19. WARRANTY

CONSULTANT shall perform its services in accordance with generally accepted industry and professional standards. If, within the 12-month period following completion of its services, OC San informs the CONSULTANT that any part of the services fails to meet those standards, the CONSULTANT shall, within the time prescribed by OC San, take all such actions as are necessary to correct or complete the noted deficiency(ies).

SECTION 20. INDEMNIFICATION

To the fullest extent permitted by law, the CONSULTANT shall indemnify, defend (at the CONSULTANT's sole cost and expense and with legal counsel approved by OC San, which approval shall not be unreasonably withheld), protect and hold harmless OC San and all of OC San's officers, directors, employees, consultants, and agents (collectively the "Indemnified Parties"), from and against any and all claims, damages, liabilities, causes of action, suits, arbitration awards, losses, judgments, fines, penalties, costs, and expenses (including, without limitation, attorneys' fees, disbursements and court costs, and all other professional, expert, or CONSULTANT's fees and costs, and OC San's general and administrative expenses) individually, a "Claim" and collectively, "Claims", which may arise from or are in any manner related, directly or indirectly, to any work performed or any operations, activities, or services provided by the CONSULTANT in carrying out its obligations under this Agreement to the extent of the negligent, recklessness, and/or willful misconduct of the CONSULTANT, its principals, officers, agents, employees, CONSULTANT's suppliers, Subconsultants, Subcontractors, and/or anyone employed directly or indirectly by any of them, regardless of any contributing negligence or strict liability of an Indemnified Party. Notwithstanding the foregoing, nothing herein shall be construed to require the CONSULTANT to indemnify the Indemnified Parties from any Claim arising solely from:

- (A) the active negligence or willful misconduct of the Indemnified Parties; or
- (B) a natural disaster or other act of God, such as an earthquake; or
- (C) the independent action of a third party who is neither one of the Indemnified Parties nor the CONSULTANT, nor its principal, officer, agent, employee, nor the CONSULTANT's supplier, Subconsultant, Subcontractor, nor anyone employed directly or indirectly by any of them.

Exceptions (A) through (B) above shall not apply, and the CONSULTANT shall, to the fullest extent permitted by law, indemnify the Indemnified Parties from Claims arising from more than one cause if any such cause taken alone would otherwise result in the obligation to indemnify hereunder.

The CONSULTANT's liability for indemnification hereunder is in addition to any liability the CONSULTANT may have to OC San for a breach by the CONSULTANT of any of the provisions of this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit the CONSULTANT's indemnification obligation or other liability hereunder. The terms of this Agreement are contractual and the result of negotiation between the Parties. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code section 1654) that ambiguities are to be construed against the drafting Party shall not be employed in the interpretation of this Agreement.

SECTION 21. DUTY TO DEFEND

The duty to defend hereunder is wholly independent of and separate from the duty to indemnify and such duty to defend shall exist regardless of any ultimate liability of the CONSULTANT and shall be consistent with Civil Code section 2782.8. Such defense obligation shall arise immediately upon presentation of a Claim by any person if, without regard to the merit of the

Claim, such Claim could potentially result in an obligation to indemnify one or more Indemnified Parties and upon written notice of such Claim being provided to the CONSULTANT. Payment to the CONSULTANT by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition precedent to enforcing such Indemnified Party's rights to indemnification hereunder. In the event a final judgment, arbitration, award, order, settlement, or other final resolution expressly determines that the Claim did not arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONSULTANT, to any extent, then OC San will reimburse the CONSULTANT for the reasonable costs of defending the Indemnified Parties against such Claims. Additionally, in no event shall the cost to defend charged to CONSULTANT exceed CONSULTANT's proportionate percentage of fault.

The CONSULTANT's indemnification obligation hereunder shall survive the expiration or earlier termination of this Agreement until such time as action against the Indemnified Parties for such matter indemnified hereunder is fully and finally barred by the applicable statute of limitations.

SECTION 22. COMPLIANCE WITH OC SAN POLICIES AND PROCEDURES

The CONSULTANT shall be required to comply with all OC San policies and procedures. OC San requires the CONSULTANT and its Subconsultants/Subcontractors to follow and ensure their employees follow all Federal, State, and local regulations as well as OC San's safety standards while working at OC San locations. If during the course of the contract it is discovered that OC San's safety standards do not comply with Federal, State, or local regulations, then the CONSULTANT is required to follow the most stringent regulatory requirement at no additional cost to OC San. The CONSULTANT and all of its employees and Subconsultants/Subcontractors shall adhere to all applicable Contractor Safety Standards attached hereto as Attachment "L".

SECTION 23. GOVERNING LAW

This Agreement shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in Orange County in the event any action is brought in connection with this Agreement or the performance thereof.

SECTION 24. TIME OF ESSENCE

Time is of the essence in the performance of this Agreement.

SECTION 25. CONFLICT OF INTEREST

The CONSULTANT covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of the services contemplated by this Agreement. No person having such interest shall be employed by or associated with the CONSULTANT.

SECTION 26. ENTIRE AGREEMENT

This Agreement constitutes the entire understanding and agreement between the Parties and supersedes all previous negotiations between them pertaining to the subject matter hereof.

IN WITNESS WHEREOF, this Agreement has been executed in the name of OC San and the CONSULTANT by their respective duly authorized officers, as of the date first written above.

HDR ENGINEERING, INC.

By _____ Date _____

Printed Name & Title

ORANGE COUNTY SANITATION DISTRICT

By _____ Date _____
Chad P. Wanke
Board Chairman

By _____ Date _____
Kelly A. Lore
Clerk of the Board

By _____ Date _____
Ruth Zintzun
Finance & Procurement Manager

Attachments: Attachment "A" Sample Scope of Work
Attachment "B" Not Used
Attachment "C" Not Used
Attachment "D" Allowable Direct Costs
Attachment "E" Rates Proposal
Attachment "F" Not Used
Attachment "G" Not Used
Attachment "H" Not Used
Attachment "I" Not Used
Attachment "J" Not Used
Attachment "K" Not Used
Attachment "L" Contractor Safety Standards
Attachment "M" Iran Contracting Act Verification

ATTACHMENT “A”

SAMPLE SCOPE OF WORK

ATTACHMENT "A"

SAMPLE SCOPE OF WORK DESCRIPTION

OC SAN staff will develop detailed scope of work to be included in each Request for Task Order Proposal (RFTOP). The RFTOP will require Consultants to base their proposals on the scope of work included in the RFTOP. The remainder of this document are the templates typically used for design projects. Notes to scope editor are shown, although they will be removed before a scope of work is included in a RFTOP. Yellow highlighted text indicates where project specific information or a hypothetical example is given.

Design Task Order

Attachment A - Scope of Work

1 PROJECT REQUIREMENTS

Provide professional design engineering services for the project described herein.

1.1 BACKGROUND

- A. The Secondary Clarifiers at Plant No. 1 were constructed under Project Nos. P1-16 (1973), P1-36-2 (1995), and P1-82 (2005). A buried ductile iron plant water line around the secondary clarifiers feeds the scum sprayers and hose bibs. Because the plant water chemical composition is so corrosive to ductile iron, many failures have occurred.

1.2 GENERAL PROJECT DESCRIPTION

- A. This project includes the replacement of approximately 1800 feet of existing 6-inch ductile iron buried plant water piping, valves, fittings, and connections.
- B. A location map is provided in **Figure 1**.

[insert location map]

Figure 1 - Project Location Map

1.3 PROJECT ELEMENTS

- A. **Element 1: Piping** – Replace the existing 1,800 feet of 6-inch buried ductile iron plant water piping with new 6-inch plant water piping.
- B. Assumptions for level of effort:
1. 1,600 feet of piping shall be below grade and 200 feet shall be either above or below grade.
 - a. 1,600 feet of piping is located around the Secondary Clarifiers. Assume high-density polyethylene (HDPE) as the pipe material with appropriate dimension ratio value.
 - b. 200 feet of piping will re-route the existing plant water line on the northwest end of the Secondary Clarifiers. Recent projects disconnected the existing plant water line at various locations resulting in an incomplete loop. This piping will reconnect the lines to allow for a complete loop. See Exhibit 13.1 for photos and Exhibit 13.3 for proposed routing design.
 - (1) For above grade pipe material, assume cement-lined ductile iron or fiberglass-reinforced plastic.
 2. Follow existing alignment with new pipe. New alignments shall be kept as close to the existing alignment as feasible.
 - a. The Secondary Effluent Junction Box No. 4 (SEJB-4), located at the southwest corner of the Secondary Clarifiers, is congested with various utilities, such as plant water, secondary effluent, and reclaimed water lines, and associated valves. Follow the existing alignment in this important area.
 - b. Concrete encasement of HDPE, located on the west side of the Secondary Clarifiers on Fuentes Road, was installed under project P1-102 (2006). Assume potholing is necessary to survey the edge of the concrete and confirm the limits of the existing concrete encasement

do not interfere with this project. As much as possible, the new alignment shall avoid the concrete encasement.

1.4 PROJECT SCHEDULE

- A. **Table 1** lists major project deliverables along with Orange County Sanitation District's (OC SAN) review and approval periods. CONSULTANT shall comply with the deadlines indicated in that table. OC SAN will consider an alternative CONSULTANT proposed schedule provided it is consistent with OC SAN resources, schedule constraints, and adds value. The negotiated durations will set the design baseline schedule.

Table 1 – Project Milestones and Deadlines

MILESTONE	DEADLINE
Kickoff Meeting	The kickoff meeting will be scheduled to coincide with the Project Notice to Proceed (NTP).
Preliminary Design Memo (PDM)	[XX] workdays from Preliminary Design Phase NTP.
OC SAN Review of PDM	10 workdays from receipt of PDM.
Submit Design Submittal 3 (DS3)	[YY] workdays from approval of PDM.
OC SAN Review of DS3	15 workdays from receipt of DS3.
Submit Final Design Submittal (FDS)	15 workdays from receipt of OC SAN comments on DS3.
OC SAN Review of FDS	10 workdays from receipt of FDS.
Submit Final Technical Plans and Specifications (FTPS)	15 workdays from receipt of OC SAN comments on FDS.
Total	[ZZZ] workdays

1.5 PROJECT MANAGEMENT

- A. CONSULTANT shall be responsible for managing CONSULTANT's project execution, schedule, budget, subconsultants, and coordination with other projects.
- B. Per **Exhibit 18**, PMWeb will be used for the management of this agreement.
- C. [Monthly Progress Report: Submit monthly progress reports at the same time as monthly invoices that include the following contents:
1. Work activities completed to date, in the current reporting period, and projected for the coming month.
 2. A brief description of outstanding issues and potential cost, schedule, quality impacts.
 3. Potential changes in the project scope or design scope.
 4. Any corrective actions needed to avoid potential impacts.
 5. Budget status: actual costs to date, costs to complete, and costs at completion.
 6. Schedule status: variances between scheduled and forecasted milestone dates.]
- D. Monthly Invoices: Provide a monthly cost report and/or invoices, which shall document the man-hours and billing rate for each person that works on the project, and shall include the following:
1. Budget
 2. Current billing period invoicing
 3. Previous billing period "total invoiced to date"
 4. Budget Amount Remaining
 5. Current billing period "total percent invoiced to date"

1.6 QUALITY CONTROL

- A. Provide Quality Assurance and Quality Control of the work.
- B. Provide documentation upon request that the CONSULTANT has performed a quality control review in-house, and all the comments have been addressed prior to providing any submittals to OC SAN.

1.7 PROJECT MEETINGS

- A. CONSULTANT shall communicate throughout the project to keep OC SAN apprised of the job, review work-in-progress, share information, discuss project submittals, present findings of technical analyses, receive and resolve comments, and obtain decisions and direction by OC SAN staff.
 - 1. **Table 2** below lists the anticipated meetings and site visits. Microsoft Teams shall be used for meetings. CONSULTANT will provide an agenda 2 workdays prior to each meeting. Meeting minutes will be submitted to the OC SAN project manager for review within 3 workdays of the meeting.

Table 2 – Project Assumed Meetings and Site Visits

DESIGN ACTIVITY	MEETINGS	SITE VISITS
Kickoff Meeting	1 (1-hour)	
PDM	Progress meeting (1-hour, every 2 weeks)	8 hours
PDM Workshop	2 (1-hour)	
DS3	Progress meeting (1-hour, every 2 weeks)	8 hours
DS3 Workshop	2 (1-hour)	
FDS	Progress meeting (1-hour, weekly)	
FDS Workshop	1 (1-hour)	
FTPS	Progress meeting (1-hour, weekly)	
Construction Services	6 hours	24 hours
Closeout	4 hours	12 hours

1.8 SUBMITTAL REVIEWS

- A. Deliverables (other than specifications) shall be submitted in searchable PDF format with no hard copy. Deliverables shall be bookmarked and hyperlinked for navigation per **Exhibit 14**.
- B. OC SAN has standardized on the use of Bluebeam Revu for reviewing and providing comments to PDF files. The purpose of the studio session is to provide review and collaboration. OC SAN staff will create the Bluebeam studio session, invite attendees, configure, and manage the studio session. Make drawing submittals in Bluebeam and respond to OC SAN comments in Bluebeam per **Exhibit 15**.

1.9 SPECIFICATIONS

- A. Prior to preparing or editing specifications, CONSULTANT shall meet with OC SAN staff to determine which OC SAN and CONSULTANT provided specifications should be included in the design. After discussions, all specifications should be loaded in Microsoft Teams (Teams) early in design and prior to editing for DS3.
- B. Tailor all specifications to project and remove requirements that do not apply.
- C. Unless a CONSULTANT is using their own specification management software, Specifications should remain in Teams for editing throughout design. Make all edits to specifications hosted in Teams. Unless agreed to, Specifications should not be removed from Teams or edited elsewhere.
- D. Provide specifications as Microsoft Word (Word) files with Track Changes enabled throughout design.

- E. OC SAN staff will review specifications during submittal review periods. CONSULTANT shall respond to OC SAN comments using Word “Reply” and “Resolve.” CONSULTANT shall “Reply” to each OC SAN comment describing how the comment will be addressed and revise the specification, as needed, to address the comment. “Resolve” will be used by the reviewer or designee to confirm their comment has been addressed. For more information see **Exhibit 16**.
- F. Prior to advertisement, all Word comments and revisions shall be Track Changes accepted, rejected, resolved, or deleted by OC SAN staff prior to bid.

2 PRELIMINARY DESIGN

All significant material and equipment decisions are to be made before the start of Design. At the end Preliminary Design, major design elements shall be fixed, and major equipment, footprints, and utility connection locations shall be well established. The extent of the design and the number and type of drawings shall also be established.

2.1 PRELIMINARY DESIGN AND PDM

- A. The PDM shall consist of a PowerPoint presentation. Present PDM findings and recommendations to OC SAN in a stakeholder meeting using the PowerPoint presentation mentioned in this section for consensus before the start of Design.
- B. Identify any equipment that has one competitive supplier (i.e., sole source). In those cases, recommend an appropriate procurement strategy compatible with California Law and OC SAN policies.
- C. Develop 2 conceptual design alternatives for the plant water piping alignment.
 - 1. Alternatives:
 - a. Reuse exiting alignment and existing points of connection
 - b. Alternate alignment along tunnels in and around secondary clarifiers
 - 2. Perform the following with each alternative:
 - a. Cost, benefit, and life cycle analysis.
 - b. Identify plant water construction shutdown requirements with estimated durations.
 - c. Identify construction access requirements and limitations.
 - d. Prepare preliminary drawings (sketches).
 - 3. Discuss the available alternatives with OC SAN. The PDM shall include the recommendation alternative.
- D. Prepare drawings showing:
 - 1. Proposed alignment of piping
 - 2. Proposed piping materials and quantities
 - 3. Proposed quantity and type of valves and valve cans
 - 4. Proposed connection points which include the following:
 - a. New replacement pipes connecting to existing main plant water line
 - b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
 - 5. Demolition of existing ductile iron pipes and valves
 - 6. Proposed design of new valves and valve cans
 - 7. Proposed design of connection points
 - a. New replacement pipes connecting to existing main plant water lines

- b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
- 8. Proposed design of pipe supports by typical detail and max spacing table
- E. Summarize key constructability and construction sequencing constraints.
 - 1. Develop process flow schematic of the components of the plant water system at Plant No. 1 that impact the pipelines being replaced.
- F. Prepare preliminary construction schedule.
- G. Prepare P&IDs: Fully detailed for each design "module", e.g., 1 pump set typical of all with proposed tagging strategy.
- H. Perform any potholing activities required for the concrete encasement survey specified under Element 1.
- I. Quantify soil contamination by determining the volume of excavation work needed to perform the Work. Coordinate with OC SAN ENGINEER to determine the area of excavation. Soil testing is not necessary.
- J. Develop testing requirements. Assume:
 - 1. Pressure leak and valve testing shall be included.
 - 2. Plant water operating pressure is 110 PSI.

2.2 PRELIMINARY DESIGN CONSTRUCTION COST ESTIMATE

- A. Prepare an AACE International Class 3 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01. Data used to prepare the cost estimate shall be included as an attachment to the PDM.
 - 1. Determine project specific and appropriate values to use for the percentages for profit, bond, and insurance.
 - 2. Costs for project level allowance, insurance, profit, and bond shall be cumulative and listed as individual line items.
 - 3. Allowances or mark ups should be well explained and itemized.
 - a. Include "Market Volatility" allowance of xx%.(revise based on the market conditions)
 - b. Do not setup allowance for change orders.
 - c. Do not escalate to midpoint of construction - this is by OC SAN.
 - 4. Specialty work should be recently (under 6 months) estimated by vendor.
 - a. For example, sewer bypassing services should be estimated by vendor (i.e., Rain 4 Rent).
 - b. Provide vendor quotes for high-cost equipment.
 - c. Minor equipment costs may be documented by written telephone quotations.
 - 5. Provide breakdown of lump sum costs.
 - 6. Show labor rates so they can be checked.
 - 7. Provide all back back up for all documentation obtained for the cost estimate purposes. The cost estimate back up shall have the date and the vendor name/contact name. If catalog price is used, provide the year of that publication.
- B. Prepare estimate of construction duration. The suggested construction duration shall take in considerations the verifiable lead time for all equipment.

3 DESIGN

Prepare biddable plans, technical specifications, other Bid Documents, and any associated design calculations, required to complete the Project Elements.

3.1 DS3 DELIVERABLES

- A. Meet at a 50% completion level with OC SAN staff to review design progress. Formal deliverables are not necessary. QA/QC is also not required for this preview.
- B. At this submittal, the design is essentially finished and submitted as complete. DS3 shall include all finished and checked plans and specifications. OC SAN staff will review DS3 and provide comments to the drawings and specifications. The CONSULTANT should be finished with no remaining design work except for OC SAN comments provided at DS3 review and their incorporation at FDS.
- C. [Prepare construction drawings in CAD conforming to OC SAN's CAD Manual. A CAD compliance check will be performed at DS3 (Exhibit 17, Chapter 8 explains the CAD compliance check, and Appendix D contains the "CAD Standards Compliance Checklist" summarizing all items checked by OC SAN). OC SAN will provide base layers and utilities for Work locations within the treatment plant boundaries.]

3.2 DS3 COST ESTIMATE

- A. Prepare an AACE International Class 2 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01 based on the DS3 design. Data used to prepare the cost estimate shall be included as an attachment to DS3.
- B. Prepare estimate of construction duration.

3.3 FDS DELIVERABLES

- A. Final Design Submittal (FDS) is for OC SAN to confirm all comments from DS3 have been addressed and incorporated and add any additional comments.

3.4 FTSP DOCUMENTS

- A. Final Technical Plans and Specifications is for the CONSULTANT to address and incorporate all comments and provide all necessary stamps and signatures for a complete bid package suitable for advertisement by OC SAN.

3.5 CONSTRUCTION COST ESTIMATE "ENGINEER'S ESTIMATE"

- A. 30 calendar days prior to advertisement, refresh the DS3 Class 2 cost estimate. Get updated vendor quotes used to prepare the DS3 cost estimate. This will become the Engineer's Estimate published in the front-end documents.

3.6 PERMITTING ASSISTANCE ([ALLOCATE 60 HOURS] [NOT INCLUDED IN THIS AGREEMENT])

- A. [For all applicable Project Elements of this Scope of Work, provide Bid Documents that ensure that the design complies with all conditions of existing permits and permits required to construct and implement this project. Testing, construction drawings, specifications, and supplemental drawings shall be prepared, as necessary, in the format required to obtain all permits.]
- B. Assist OC SAN in obtaining permits. This assistance shall include identifying applicable permits, completing required design, plan preparation, application forms provided by OC SAN, preparing supporting documentation for the permit applications as required by the issuing agency, furnishing the required number of copies of all construction drawings and exhibits, and attend meetings with permitting agencies at the request of OC SAN.
- C. Except for construction contractor-furnished permits, OC SAN staff will execute all applications. CONSULTANT shall determine the cost and requirements of all permits. All permit fees will be paid directly by OC SAN and will not be part of CONSULTANT's fee.
- D. Submit all supporting documentation in a timely fashion for all permits required for this project as described below.
 - 1. Caltrans Encroachment Permits

- a. Determine if encroachment permits or other types of permits are required by Caltrans for the design and construction phases. Provide the work necessary to obtain such permits including coordinating and attending meetings.

2. City/County Encroachment Permits

- a. Provide coordination, work effort, and attend meetings, as required, to obtain encroachment permits from each city and agency who has jurisdiction. Process the plans through the cities and agencies for approval, revise plans, and meet with them, as required, to obtain approval.]

3.7 BID SUPPORT SERVICES

- A. Provide answers to bidder's questions related to the design. Provide revisions to specifications and drawings when needed for addendum.
- B. Within 2 weeks of the bid opening date, prepare conformed document set (drawings, databases, specification, and other required materials) that incorporates the addenda. See requirements of OC SAN's CAD Manual.

3.8 POPULATE PMWEB LIST OF SUBMITTALS (ALLOCATE 24 HOURS)

- A. PMWeb is used to manage communication with the contractor. OC SAN uses an Excel template to populate the list of all submittals. The CONSULTANT shall review each project specification and complete the Submittal Items Template as follows:
 1. Enter the list of project specifications.
 2. Enter the list of commissioning packages. Commissioning packages are defined by Section 01810, Commissioning.
 3. Enter the following information for each submittal item.
 - a. Specification section: enter the specification section requiring the submittal.
 - b. Submittal Item description: enter the description of the submittal. Submittal items that refer to multiple specifications shall include referenced specification sections in brackets.
 - c. Comments: enter notes, comments, or clarifications. This field is optional.
 - d. Commissioning package: enter the commissioning package of the submittal item. Submittal items shall be duplicated when the same submittal is required for multiple commissioning packages. Items shall be separated into mobilization, general construction, or a commissioning package defined by the project specifications.
 - e. Phase: Identify which phase each submittal is required to be approved.
 - f. Retention: Specify if the submittal is a Project File or Facility Record based on OC SAN's Records Retention Policy.
 - g. Lead time: Specify the appropriate number of workdays that OC SAN has to review the particular submittal.
 - h. Load: Specify if the submittal should be loaded into PMWeb prior to NTP, upon contractor approval, or prior to the start of commissioning.
- B. OC SAN will provide a PMWeb Master Submittal Items template that includes the submittals required by OC SAN's Master Specifications. The CONSULTANT shall not deviate from the Master PMWeb Submittal Items, except as required by the project specific specifications. The CONSULTANT shall develop submittal items for specifications that are not part of OC SAN's Master Specifications.
- C. OC SAN will provide a 1-hour virtual training on the use of the PMWeb Master Submittal Items Template.
- D. The CONSULTANT shall populate, receive comments, address comments, and provide completed submittal form as follows:
 1. 20 workdays after advertisement date.

3.9 SAFETY AND RISK MEETING

- A. Ensure that an OC San Risk Management safety and security professional has been assigned to the project.
- B. CONSULTANT shall prepare and meet with OC San Risk Management personnel at all design stages to review Exhibit 11 Sample Full Project Safety Review Plan and Exhibit 12 Sample Risk Management Check List. This shall be completed in accordance with Exhibit 4 Risk Management Requirements.
- C. CONSULTANT shall update Exhibits 11 and 12 throughout the design phases. CONSULTANT shall provide OC San Risk Management with the final copies of Exhibit 11 and Exhibit 12 at completion of the Design Project.

4 CONSTRUCTION SERVICES

OC SAN will administer and provide field inspection for construction contracts. Construction and installation support services shall be provided by the CONSULTANT on an as-needed basis and as requested by OC SAN. The services are indicated below.

4.1 SUBMITTAL REVIEWS (ALLOCATE 15 HOURS)

- A. OC SAN will manage submittal review. The CONSULTANT shall use PMWeb to review and return comments to OC SAN. Return comments within 5 workdays.

4.2 REQUESTS FOR INFORMATION (RFIS) (ALLOCATE 15 HOURS)

- A. OC SAN will manage the processing of RFI's. When requested by OC SAN, CONSULTANT shall return written responses to OC SAN within 5 workdays of receipt of RFI using PMWeb. Generate necessary sketches, figures, and modifications to the drawings for clarifications.

4.3 PROGRESS MEETINGS AND SITE VISITS

- A. Refer to **Table 2**.

4.4 RECORD DRAWINGS

- A. Verify that the Contractor's As-Built set correctly reflects the information included in the approved shop drawings, RFIs, approved Field Change Orders, plan clarifications, plan changes, and other deviations from the conformed drawings, and that the information in the set is complete.
- B. Draft Record Drawings shall be submitted to OC SAN within 4 weeks of receipt from OC SAN of the approved Contractor's As-Built drawings. The Final Record Drawings shall be submitted within one week of receipt of OC SAN comments on the Draft Record Drawings.
- C. Prepare Draft Record Drawings based on the Final Field Markup Set for all drawings in accordance with the requirements in the CAD Manual. Submit the Draft Record Drawings to the OC SAN Resident Engineer. The Draft Record Drawings will be reviewed for content and CAD compliance by OC SAN staff. If no comments are identified, CONSULTANT shall prepare the Final Record Drawings and submit them along with the Contractor's field markup set to the Project Manager. For content and placement of record drawing stamp, see CAD Manual.
- D. Submit an electronic copy of the record drawings to OC SAN for review and approval. The acceptance of the record drawings shall be deemed a condition for completion of work.
- E. Contractor-generated drawings described in the Design Guidelines and the shop drawings will not be updated by CONSULTANT. The format and quantities for delivery of the submittals shall be listed below:

Contents	Draft Record Drawings	Final Record Drawings
All related electronic files, including CAD and compiled PDFs.	One copy to be uploaded to Microsoft Teams.	One copy to be uploaded to Microsoft Teams.

4.5 EQUIPMENT INFORMATION DATABASE (EID) (ALLOCATE [X] HOURS [NOT INCLUDED IN THIS AGREEMENT])

- A. OC SAN uses Maximo software to manage and track asset information. When new assets are added or existing assets are modified by a project, an EID Excel spreadsheet is used to populate or update Maximo asset information. CONSULTANT shall meet with OC SAN EIM staff to request an EID spreadsheet pre-populated with the new or modified assets. OC SAN staff will provide training on how to populate the EID spreadsheet. Field work will be needed to apply equipment tags and record equipment nameplate information and serial numbers to populate the EID. Coordinate with Maintenance Specialists (David Haug or designee, Div. 870) to walk new facilities to verify accuracy of P&IDs and EID.

4.6 [UPDATE BASELINE DRAWINGS]

5 STAFF ASSISTANCE

OC SAN staff member or designee assigned to work with CONSULTANT on the design of this project is Jessica Cheung. Phone (714) 593-7147, e-mail jcheung@ocsan.gov.

6 EXHIBITS

- A. Exhibits 1-3, 5-10 – Not Used
- B. Exhibit 4 – Risk Management Requirements
- C. Exhibit 11 – Sample Full Project Safety Review Plan
- D. Exhibit 12 – Sample Risk Management Checklist
- E. Exhibit 13 – Project Reference Material
 - a. 13.1 – Photos
 - b. 13.2 – Plant 1 Plant Water System Map
 - c. 13.3 – Proposed Design Idea (The CONSULTANT may start with this conceptual design.)
 - d. 13.4 – Proposed Valve Cans (The CONSULTANT may start with this conceptual design.)
 - e. 13.5 – Record Drawings (Available Upon Request)
 - (1) P1-82, Activated Sludge Plant Rehabilitation (2005)
 - (2) P1-36-2, Secondary Treatment Improvements at Plant No. 1 (1995)
 - (3) P1-16, 46 MGD Activated Sludge Plant at Reclamation Plant No. 1 (1973)
 - (4) P1-102, Secondary Activated Sludge Facility 2 at Plant No.1 (2006)
- F. Exhibit 14 – BlueBeam Designer Training for Submission
- G. Exhibit 15 – BlueBeam Designer User Training
- H. Exhibit 16 – Spec Review using Microsoft Word and Teams
- I. Exhibit 17 – [CAD Standard Manual](#)
- J. Exhibit 18 – PMWeb

JC:tk

PROFESSIONAL DESIGN SERVICES AGREEMENT

This PROFESSIONAL DESIGN SERVICES AGREEMENT (Agreement), to be effective this 1st day of July, 2024, is made and entered into by and between:

ORANGE COUNTY SANITATION DISTRICT
hereinafter referred to as "OC San"

AND

KENNEDY/JENKS CONSULTANTS, INC.
hereinafter referred to as "CONSULTANT"

individually referred to as the "Party" and collectively as the "Parties".

RECITALS

WHEREAS, in accordance with Ordinance No. OC SAN-61 and pursuant to a Request for Qualifications ("Underlying RFQ"), the Board of Directors of OC San, by action on May 22, 2024, approved the award of the Agreement for **CONTRACT NO. FE24-00-09**, to CONSULTANT to provide services for selected projects on a task order (Task Order) basis from July 1, 2024 to June 30, 2027; and

WHEREAS, consistent with the Underlying RFQ, the CONSULTANT has been prequalified to perform services for the following project types: Project Type 2: Linear and Collections and Project Type 3: Process, Electrical and Instrumentation & Control (I&C); and

WHEREAS, for Task Orders estimated to cost \$100,000 or less, the Director of Engineering, with concurrence of the Purchasing Manager, may solicit a proposal from one (1) firm on the prequalified list, which will include the project types for which the consultants are prequalified; and

WHEREAS, the CONSULTANT is qualified to provide and has agreed to provide the necessary professional engineering and related services under this Agreement; and

WHEREAS, by this Agreement, the Parties intend to set forth the general terms and conditions that will apply to any specific project for which CONSULTANT is given a Task Order by OC San.

NOW, THEREFORE, OC San and the CONSULTANT mutually agree as follows:

SECTION 1. SCOPE OF AGREEMENT

OC San, at its sole discretion, may, from time to time during the term of this Agreement, issue a Request for Task Order Proposal ("RFTOP") setting forth the detailed requirements and scope of work to be performed on the identified project and thereafter, upon receipt of a proposal from the CONSULTANT, may issue a Task Order to proceed with the work. The scope of work will be in a form attached hereto as Attachment "A" – Sample Scope of Work.

Upon execution by OC San, the Task Order shall become an operative part of this Agreement. Should any conflict or inconsistency exist in the contract documents identified in this section, the conflict or inconsistency shall be resolved by applying the provisions in the highest priority document, which shall be determined in the following order of priority:

1. Agreement and any amendments thereto
2. the Task Order
3. the RFTOP

SECTION 2. TASK ORDER ISSUANCE BY OC SAN

The Task Order issued by OC San shall, specifically or by reference to the RFTOP and corresponding proposal, set forth the terms that will apply to the specific project for which the services will be rendered. Those terms shall include, but not be limited to, scope of work, time for performance, and compensation.

SECTION 3. TERM

This Agreement shall commence on the effective date of this Agreement and terminate on June 30, 2027, unless further extended by written agreement signed by the Parties. Any work that is required by a Task Order and is not finished by the date of termination shall be continued and completed by the CONSULTANT and the terms and conditions of this Agreement shall continue in effect for that time. OC San may, at its option, renew this Agreement for two (2) additional terms of one (1) year each, for a maximum contract duration of five (5) years.

SECTION 4. COMPENSATION

The total compensation payable to the CONSULTANT pursuant to this Agreement shall not exceed One Million Dollars (\$1,000,000) per year in accordance with the terms described in SECTION 3 - TERM. The compensation includes, but is not limited to, fees for professional engineering services based on the CONSULTANT's burdened labor rates, overhead, and profit, and fees from the CONSULTANT's subconsultants/subcontractors (Subconsultants/Subcontractors). The specific amount of compensation payable to the CONSULTANT for services rendered on an individual project, pursuant to a Task Order, shall be established for each Task Order and shall not exceed Five Hundred Thousand Dollars (\$500,000) per individual Task Order unless authorized by OC San's Board of Directors. The CONSULTANT agrees and acknowledges that the execution of this Agreement does not in any way guarantee that a Task Order will be issued to the CONSULTANT. Moreover, execution of this Agreement shall not entitle the CONSULTANT to any form of payment or compensation from OC San without OC San first having issued a written Task Order.

A. Total Compensation

Total compensation for any Task Order shall not exceed the amount indicated in the approved Task Order and any approved amendments thereto.

B. Labor

As a portion of the total compensation to be paid to CONSULTANT, OC San shall pay to CONSULTANT a sum equal to the burdened salaries (salaries plus benefits) actually paid by CONSULTANT charged on an hourly-rate basis to the project and paid to

CONSULTANT's personnel. For each Task Order, the cost of benefits for CONSULTANT shall be based on the fringe rates identified in Attachment "E" – Rates Proposal. Upon request of OC San, CONSULTANT shall provide OC San with certified payroll records of all employees' work that is charged to the project.

C. Overhead

As a portion of the total compensation to be paid to CONSULTANT, for each Task Order, OC San shall compensate CONSULTANT for overhead at the rates equal to the percentage of burdened labor as specified in Attachment "E" – Rates Proposal.

D. Profit

For each Task Order, profit shall be ten percent (10%) of burdened labor and overhead for all CONSULTANT fees and its Major Subconsultants (Architecture & Engineering [A&E] consulting services) whose fees for services are greater than or equal to \$100,000. Profit shall remain fixed through the term of this Agreement, inclusive of any renewals identified in Section 3 – TERM.

As a portion of the total compensation to be paid to CONSULTANT and its Major Subconsultants, OC San shall pay profit for all services rendered by CONSULTANT and its Major Subconsultants for the Task Order as specified in the previous paragraph.

E. Subconsultants

For each Task Order, any Minor Subconsultant (A&E consulting services) whose fees for services are less than \$100,000 and any Subconsultant/Subcontractor (non-A&E consulting services), CONSULTANT shall pay to Subconsultant/Subcontractor total compensation based on an established hourly rate schedule by personnel classification. The hourly rates shall cover burdened salary costs, overhead and profit. The compensation for each Minor Subconsultants and Subconsultants/Subcontractors (non-A&E consulting services), including both labor related fees, and direct costs shall not exceed the amount, as negotiated prior to award of a Task Order.

For each Task Order, any Major Subconsultant (A&E consulting services) whose fees for services are greater than or equal to \$100,000, total compensation for labor will be based on burdened labor rates, overhead, and profit, as negotiated prior to award of Task Order. Prior to award of Task Order, the CONSULTANT shall provide to OC San, if available, an audit performed for another public agency which documents the Major Subconsultant's labor burden rate and overhead rate. This audit shall be the most current available and have been conducted for a period that ended within twelve months of the task order proposal due date. This information shall be provided by CONSULTANT within ten (10) business days from request by OC San.

F. Direct Costs

OC San shall reimburse CONSULTANT and its Subconsultants/Subcontractors the actual costs of permits and associated fees, travel, licenses, and other services in an amount not to exceed the sums set forth in each approved Task Order. OC San shall also pay to CONSULTANT actual costs for equipment rentals, leases or purchases with prior written approval of OC San. Upon request, CONSULTANT shall provide to OC San receipts and

other documentary records to support CONSULTANT's request for reimbursement of these amounts, refer to Attachment "D" – Allowable Direct Costs. All incidental expenses shall be included in the overhead cost pursuant to this SECTION 4 – COMPENSATION.

G. Other Direct Costs

OC San will reimburse the CONSULTANT for Other Direct Costs incurred by CONSULTANT and its Subconsultants/Subcontractors due to modifications in the scope of work resulting from field investigations and field work required by the Task Order. These items may include special equipment, test equipment and tooling, and other materials and services not previously identified. Refer to Attachment "D" – Allowable Direct Costs for payment information.

H. Reimbursable Direct Costs

OC San will reimburse the CONSULTANT for reasonable travel and business expenses as described in this section and further described in Attachment "D" – Allowable Direct Costs. The reimbursement of the above-mentioned expenses will be based on an "accountable plan" as considered by the Internal Revenue Service (IRS). The plan includes a combination of reimbursements based upon receipts and a "per diem" component approved by the IRS. The most recent schedule of the per diem rates utilized by OC San may be found on the U.S. General Services Administration website at <https://www.gsa.gov/travel/plan-book/per-diem-rates>.

The CONSULTANT shall be responsible for the most economical and practical means of management of reimbursable costs inclusive, but not limited to, travel, lodging, and meals arrangements. OC San shall apply the most economic and practical method of reimbursement which may include reimbursements based upon receipts and/or "per diem" as deemed the most practical.

CONSULTANT shall be responsible for returning to OC San any excess reimbursements after the reimbursement has been paid by OC San.

Travel and travel arrangements – Any travel involving airfare, overnight stays, or multiple day attendance must be approved by OC San in advance.

Local travel is considered travel by the CONSULTANT within OC San general geographical area which includes Orange, Los Angeles, Ventura, San Bernardino, Riverside, San Diego, Imperial, and Kern Counties. Automobile mileage is reimbursable if CONSULTANT is required to utilize a personal vehicle for local travel.

Lodging – Overnight stays will not be approved by OC San for local travel. However, under certain circumstances overnight stay may be allowed at the discretion of OC San based on reasonableness of meeting schedules and the amount of time required for travel by the CONSULTANT. Such determination will be made on a case-by-case basis and at the discretion of OC San.

Travel Meals – Per diem rates as approved by the IRS shall be utilized for travel meals reimbursements. Per diem rates shall be applied to meals that are appropriate for travel times. Receipts are not required for the approved meals.

Additional details related to the reimbursement of the allowable direct costs are provided in Attachment "D" – Allowable Direct Costs.

I. Limitation of Costs

If, at any time, CONSULTANT estimates the cost of performing the services described in CONSULTANT's proposal will exceed seventy-five percent (75%) of the not to exceed amount of the Task Order, including any approved additional compensation, CONSULTANT shall notify OC San immediately, in writing. The written notice shall indicate the additional amount necessary to complete the services. Any cost incurred in excess of the approved not to exceed amount, without the express written consent of OC San's authorized representative, shall be at CONSULTANT's own risk. This written notice shall be provided separately from, and in addition to, any notification requirements contained in the CONSULTANT's invoice and monthly progress report. Failure to notify OC San that the services cannot be completed within the authorized not to exceed amount of a Task Order is a material breach of this Agreement.

J. Method of Payment:

The CONSULTANT shall submit for approval by OC San, monthly invoices based on the total services which have been satisfactorily completed and specifying a percentage of completion. The CONSULTANT's billings shall be certified for payment by OC San only after OC San has determined that the CONSULTANT has completed each applicable project task.

CONSULTANT shall submit separate invoices for each Task Order on a monthly basis.

CONSULTANT understands that submitted costs are subject to Section 11 - AUDIT PROVISIONS, below.

K. Task Order Completion

Upon satisfactory completion by CONSULTANT of the work called for under the terms of the Task Order and upon acceptance of such work by OC San, CONSULTANT will be paid the unpaid balance of any money due for such work.

Upon satisfactory completion of the work performed under each Task Order and prior to final payment under each Task Order for such work or prior settlement upon termination of this Agreement, and as a condition precedent thereto, CONSULTANT shall execute and deliver to OC San a release of all claims against OC San arising under or by virtue of this Agreement other than such claims, if any, as may be specifically exempted by CONSULTANT from the operation of the release in stated amounts to be set forth therein.

L. False Claims

Pursuant to the California False Claims Act (Government Code Sections 12650-12655), any CONSULTANT that knowingly submits a false claim to OC San for compensation under the terms of this Agreement may be held liable for treble damages and up to a Ten Thousand Dollars (\$10,000) civil penalty for each false claim submitted. This section shall also be binding on all Subconsultants/Subcontractors.

The CONSULTANT or its Subconsultants/Subcontractors shall be deemed to have submitted a false claim when the CONSULTANT or its Subconsultants/Subcontractors: (a) knowingly presents or causes to be presented to an officer or employee of OC San a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by OC San; (c) conspires to defraud OC San by getting a false claim allowed or paid by OC San; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to OC San; or (e) is a beneficiary of an inadvertent submission of a false claim to OC San and fails to disclose the false claim to OC San within a reasonable time after discovery of the false claim.

M. California Department of Industrial Relations (DIR) Registration and Record of Wages:

To the extent the CONSULTANT's employees and/or its Subconsultants/Subcontractors who will perform work during the design, preconstruction, and construction phases of a construction contract for which Prevailing Wage Determinations have been issued by the DIR and as more specifically defined under Labor Code Section 1720 et seq., CONSULTANT and its Subconsultants/Subcontractors shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4, the work is subject to compliance monitoring and enforcement by the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776 and shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Penalties for non-compliance with the requirements of Labor Code section 1776 may be deducted from progress payments per Labor Code section 1776.

Pursuant to Labor Code section 1776, the CONSULTANT and its Subconsultants/Subcontractors shall furnish a copy of all certified payroll records to OC San and/or general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 16461(e).

N. Record of Expenses:

The CONSULTANT shall keep complete and accurate records of all costs and expenses incidental to services covered by this Agreement. Such records will be made available to OC San upon request.

O. Reallocation of Total Compensation:

OC San, by its Director of Engineering, shall have the right to approve a reallocation of the incremental amounts constituting the total compensation payable under the Task Order, provided that the total compensation for the Task Order is not increased.

SECTION 5. LIMITATIONS UPON SUBCONTRACTING AND ASSIGNMENT

The CONSULTANT shall not contract with any other person or entity to perform the services required without the written approval of OC San. This Agreement may not be assigned voluntarily or by operation of law without the prior written approval of OC San. If the CONSULTANT is permitted to subcontract any part of this Agreement by OC San, the CONSULTANT shall be responsible to OC San for the acts and omissions of its Subconsultant/Subcontractor, as it is for persons directly employed by the CONSULTANT. Nothing contained in this Agreement shall create any contractual relationship between any Subconsultant/Subcontractor and OC San. All persons engaged in the work will be considered employees of the CONSULTANT. OC San will deal directly with and will make all payments to the CONSULTANT.

SECTION 6. CHANGES TO SCOPE OF WORK

In the event of a change in the scope of work as requested by OC San or any other changes to the Task Order, the Parties shall execute an amendment to the Task Order setting forth with particularity all new terms of the Task Order, including, but not limited to, any additional compensation.

SECTION 7. DOCUMENT OWNERSHIP – CONSULTANT PERFORMANCE

A. All documents in all forms (electronic, paper, etc.), including, but not limited to, studies, sketches, drawings, computer printouts, disk files, and electronic copies prepared in connection with or related to the scope of work shall be the property of OC San. OC San's ownership of these documents includes use of, reproduction or reuse of, and all incidental rights, whether or not the work for which they were prepared has been performed. OC San's ownership entitlement arises upon payment or any partial payment for work performed and includes ownership of any and all work product completed prior to that payment. This section shall apply whether the CONSULTANT's services are satisfied by the completion of the Agreement or are terminated in accordance with other provisions of this Agreement. Notwithstanding any other provision of this section or Agreement, the CONSULTANT shall have the right to make copies of all such plans, studies, sketches, drawings, computer printouts and disk files, and specifications.

B. CONSULTANT shall not be responsible for damage caused by subsequent changes to or uses of the deliverables where the subsequent changes or uses are not authorized or approved by CONSULTANT, provided that the service rendered by CONSULTANT was not a proximate cause of the damage.

C. Copies of Work Product

Upon completion of the work required for each Task Order, the CONSULTANT shall deliver to OC San the number of copies specified in the specific Task Order scope of work of the final report containing the CONSULTANT's findings, conclusions, recommendations, and all supporting documentation and/or final design drawings and specifications. Each Task Order will define the requirements for the deliverables.

SECTION 8. INSURANCE

A. General:

- i. Insurance shall be issued and underwritten by insurance companies acceptable to OC San.
- ii. Insurers must have an "A-" Policyholder's Rating, or better, and Financial Rating of at least Class VIII, or better, in accordance with the most current A.M. Best's Guide Rating. However, OC San will accept State Compensation Insurance Fund for the required policy of Worker's Compensation Insurance subject to OC San's option to require a change in insurer in the event the State Fund financial rating is decreased below "B". Further, OC San will require CONSULTANT to substitute any insurer whose rating drops below the levels herein specified. Said substitution shall occur within twenty (20) days of written notice to CONSULTANT by OC San or its agent.
- iii. Coverage shall be in effect prior to the commencement of any work under this Agreement.

B. General Liability:

The CONSULTANT shall maintain during the life of this Agreement, including the period of warranty, Commercial General Liability Insurance written on an occurrence basis providing the following minimum limits of liability coverage: Two Million Dollars (\$2,000,000) per occurrence with Four Million Dollars (\$4,000,000) aggregate. If aggregate limits apply separately to this Agreement (as evidenced by submission of ISO form CG 25 03 or CG 25 04), then the aggregate limit may be equivalent to the per occurrence limit. Said insurance shall include coverage for the following hazards: Premises-Operations, blanket contractual liability (for this Agreement), products liability/completed operations (including any product manufactured or assembled), broad form property damage, blanket contractual liability, independent contractors liability, personal and advertising injury, mobile equipment, owners and contractors protective liability, and cross liability and severability of interest clauses. A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement(s). If requested by OC San and applicable, XCU coverage (Explosion, Collapse and Underground) and Riggers/On Hook Liability must be included in the General Liability policy and coverage must be reflected on the submitted Certificate of Insurance.

C. Umbrella Excess Liability:

The minimum limits of general liability and automobile liability insurance required, as set forth herein, shall be provided for through either a single policy of primary insurance or a combination of policies of primary and umbrella excess coverage. Umbrella excess liability coverage shall be issued with limits of liability which, when combined with the primary insurance, will equal the minimum limits for general liability and automobile liability.

D. Automobile/Vehicle Liability Insurance:

The CONSULTANT shall maintain a policy of automobile liability insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and

other vehicles providing the following minimum limit of liability coverage: combined single limit of One Million Dollars (\$1,000,000). A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement.

E. Drone Liability Insurance:

If a drone will be used, drone liability insurance must be maintained by the CONSULTANT in the amount of One Million Dollars (\$1,000,000) in a form acceptable to OC San.

F. Worker's Compensation Insurance:

The CONSULTANT shall provide such Workers' Compensation Insurance as required by the Labor Code of the State of California in the amount of the statutory limit, including Employer's Liability Insurance with a minimum limit of One Million Dollars (\$1,000,000) per occurrence. Such Worker's Compensation Insurance shall be endorsed to provide for a waiver of subrogation in favor of OC San. A statement on an insurance certificate will not be accepted in lieu of the actual endorsements unless the insurance carrier is the State of California Insurance Fund and the identifier "SCIF" and applicable endorsements are referenced on the certificate of insurance. If an exposure to Jones Act liability may exist, the insurance required herein shall include coverage for Jones Act claims.

G. Errors and Omissions/Professional Liability:

The CONSULTANT shall maintain in full force and effect, throughout the term of this Agreement, standard industry form professional liability/errors and omissions insurance coverage with coverage limits of not less than Two Million Dollars (\$2,000,000) in accordance with the provisions of this paragraph. If the policy of insurance is written on a "claims made" basis, said policy shall be continued in full force and effect at all times during the term of this Agreement and for a period of five (5) years from the date of the completion of the services hereunder.

In the event of termination of said policy during this period, the CONSULTANT shall obtain continuing insurance coverage for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement. Said coverage shall be evidenced by either a new policy evidencing no gap in coverage or by separate extended "tail" coverage with the present or new carrier.

In the event the present policy of insurance is written on an "occurrence" basis, said policy shall be continued in full force and effect during the term of this Agreement or until completion of the services provided for in this Agreement, whichever is later. In the event of termination of said policy during this period, new coverage shall be obtained for the required period to insure for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement.

The CONSULTANT shall provide to OC San a certificate of insurance in a form acceptable to OC San indicating the deductible or self-retention amounts and the expiration date of said policy and shall provide renewal certificates not less than ten (10) days prior to the expiration of each policy term.

H. Proof of Coverage:

The CONSULTANT shall furnish OC San with original certificates and amendatory endorsements effecting coverage. Said policies and endorsements shall conform to the requirements herein stated. All certificates and endorsements must be received and accepted by OC San before work commences. OC San reserves the right to require, at any time, complete, certified copies of all required insurance policies, including endorsements, effecting the coverage required. The following are approved forms that must be submitted as proof of coverage:

- | | |
|--|--|
| • Certificate of Insurance | ACORD Form 25 or other equivalent Certificate of Insurance form |
| • Additional Insurance (General Liability) | The combination of (ISO Forms) CG 2010 <u>and</u> CG 2037 |
| | All other additional insured endorsements must be submitted for approval by OC San and OC San may reject alternatives that provide different or less coverage to OC San. |
| • Additional Insured (Auto Liability) | Submit Endorsement provided by carrier for OC San's approval. |
| • Waiver of Subrogation | Submit workers' compensation waiver of subrogation endorsement provided by carrier for OC San's approval. |
| • Cancellation Notice | No endorsement is required. However, Vendor/Contractor is responsible for notifying OC San of any pending or actual insurance policy cancellation, as described in Article I. Cancellation and Policy Change Notice below. |

I. Cancellation and Policy Change Notice:

The CONSULTANT is required to notify OC San in writing of any insurance cancellation notice it receives or other knowledge of pending or actual insurance policy cancellation, within two (2) working days of receipt of such notice or acquisition of such knowledge. Additionally, the CONSULTANT is required to notify OC San in writing of any change in the terms of insurance, including reduction in coverage or increase in deductible/SIR, within two (2) working days of receipt of such notice or knowledge of same.

Said notices shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Contracts, Purchasing & Materials Management Division

J. Primary Insurance:

All liability policies shall contain a Primary and Non-Contributory Clause. Any other insurance maintained by OC San shall be excess and not contributing with the insurance provided by the CONSULTANT.

K. Separation of Insured:

All liability policies shall contain a "Separation of Insureds" clause.

L. Non-Limiting (if applicable):

Nothing in this document shall be construed as limiting in any way, nor shall it limit the indemnification provision contained in this Agreement or the extent to which the CONSULTANT may be held responsible for payment of damages to persons or property.

M. Deductibles and Self-Insured Retentions:

Any deductible and/or self-insured retention must be declared to OC San on the Certificate of Insurance. All deductibles and/or self-insured retentions require acceptance by OC San. At the option of OC San, either: a) the insurer shall reduce or eliminate such deductible or self-insured retention as respects OC San or b) the CONSULTANT shall provide a financial guarantee satisfactory to OC San guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

N. Defense Costs:

Liability policies shall have a provision that defense costs for all insureds and additional insureds are paid in addition to and do not deplete any policy limits.

O. Subconsultants/Subcontractors:

The CONSULTANT shall be responsible to establish insurance requirements for Subconsultants/Subcontractors hired by the CONSULTANT. The insurance shall be in amounts and types reasonably sufficient to deal with the risk of loss involving the Subconsultants'/Subcontractors' operations and work.

P. Limits Are Minimums:

If the CONSULTANT maintains higher limits than any minimums shown above, then OC San requires and shall be entitled to coverage for the higher limits maintained by the CONSULTANT.

SECTION 9. PROJECT TEAM AND SUBCONSULTANTS

CONSULTANT shall provide to OC San, prior to execution of a Task Order, the names and full descriptions of all Subconsultants/Subcontractors and CONSULTANT's project team members anticipated to be used in performing work under a Task Order. In its proposal, CONSULTANT shall include a description of the work and services to be performed by each

Subconsultant/Subcontractor and each of CONSULTANT's project team members. CONSULTANT shall include the respective compensation amounts for CONSULTANT and each Subconsultant/Subcontractor broken down as indicated in Section 4 – COMPENSATION, above.

There shall be no substitution of the listed Subconsultants/Subcontractors and CONSULTANT's project team members without prior written approval by OC San.

SECTION 10. ENGINEERING REGISTRATION

The CONSULTANT's personnel and its Subconsultants/Subcontractors shall be comprised of registered engineers and a staff of specialists and draftsmen in each department. The firm itself is not a registered engineer but represents and agrees that when the performance of this Agreement requires the services of a registered engineer, such services hereunder will be performed under the direct supervision of registered engineers who are registered in the State of California.

SECTION 11. AUDIT PROVISIONS

- A. OC San retains the reasonable right to access, review, examine, and audit any and all books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify that the CONSULTANT is in compliance with all the requirements under this Agreement. The CONSULTANT shall include OC San's right as described above in any and all of their subcontracts and shall ensure that these rights are binding upon all its Subconsultants/Subcontractors.
- B. OC San retains the right to examine CONSULTANT's books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify all direct and indirect costs, of whatever nature, which are claimed to have been incurred, or anticipated to be incurred, or to ensure CONSULTANT's compliance with all the requirements under this Agreement during the term of this Agreement and for a period of three (3) years after expiration or earlier termination of the Agreement.
- C. The CONSULTANT shall maintain complete and accurate records in accordance with generally accepted industry standard practices and OC San's policy. The CONSULTANT shall make available to OC San for review and audit all project-related accounting records and documents and any other financial data within fifteen (15) days after receipt of notice from OC San. Upon OC San's request, the CONSULTANT shall submit exact duplicates of originals of all requested records to OC San. If an audit is performed, the CONSULTANT shall ensure that a qualified employee of the CONSULTANT will be available to assist OC San's auditor in obtaining all project related accounting records and documents and any other financial data.

SECTION 12. LEGAL RELATIONSHIP BETWEEN PARTIES

The legal relationship between the Parties is that of an independent contractor and nothing herein shall be deemed to transform the CONSULTANT, its staff, independent contractors, or its Subconsultants/Subcontractors, into agents or employees of OC San and shall obtain no rights to any benefits which accrue to OC San's employees. CONSULTANT's staff performing services under the Agreement shall at all times be employees and/or independent contractors of the CONSULTANT. The CONSULTANT shall monitor and control its staff and wages,

salaries, and other amounts due directly to its staff in connection with the Agreement. The CONSULTANT shall be responsible for hiring, review, and termination of its staff and shall be accountable for all reports and obligations respecting them, such as social security, income tax withholding, unemployment compensation, workers' compensation insurance, and similar matters.

SECTION 13. NOTICES

All notices hereunder and communications regarding the interpretation of the terms of this Agreement, or changes thereto, shall be effected by delivery of said notices in person or by depositing said notices in the U.S. mail, registered or certified mail, return receipt requested, postage prepaid.

Notice shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue, Fountain Valley, CA 92708
Attention: Ludwig Lapus, Principal Contracts Administrator
Copy: Daniel Berokoff, Engineering Supervisor

Notice shall be mailed to CONSULTANT at:

Kennedy/Jenks Consultants, Inc.
7545 Irvine Center Drive, Ste 200
Irvine, CA 92618
Attention: Edward Yang

All communication regarding the Task Order will be addressed to the Project Manager. Direction from other OC San staff must be approved in writing by OC San's Project Manager prior to action from the CONSULTANT.

SECTION 14. TERMINATION

OC San may terminate this Agreement at any time, without cause, upon giving thirty (30) days written notice to the CONSULTANT. In the event of such termination, the CONSULTANT shall be entitled to compensation for work performed on a prorated basis through and including the effective date of termination.

The CONSULTANT shall be permitted to terminate this Agreement upon thirty (30) days written notice only if the CONSULTANT is not compensated for billed amounts in accordance with the provisions of this Agreement when the same are due. Notice of termination shall be mailed to OC San at the address listed in Section 13 – NOTICES, above.

SECTION 15. COMPLIANCE

The CONSULTANT certifies by the execution of this Agreement that it pays employees not less than the minimum wage as defined by law and that it does not discriminate in its employment with regard to race, color, religion, sex, or national origin; that it is in compliance with all Federal, State, and local directives and executive orders regarding non-discrimination in employment; and that it agrees to demonstrate positively and aggressively the principle of equal opportunity in employment.

The CONSULTANT shall comply with all applicable laws, ordinances, codes, and regulations of Federal, State, and local government in all aspects related to this Agreement and any work completed for OC San.

SECTION 16. AGREEMENT EXECUTION AUTHORIZATION

Both OC San and the CONSULTANT do covenant that each individual executing this document by and on behalf of each Party is a person duly authorized to execute this Agreement for that Party.

SECTION 17. DISPUTE RESOLUTION

In the event of a dispute arising between the Parties regarding performance or interpretation of this Agreement, the dispute shall be resolved by binding arbitration under the auspices of the Judicial Arbitration and Mediation Service ("JAMS"), or similar organization or entity conducting alternate dispute resolution services.

SECTION 18. ATTORNEY'S FEES, COSTS, AND NECESSARY DISBURSEMENTS

If any action at law or inequity or if any proceeding in the form of an Alternative Dispute Resolution is necessary to enforce or interpret the terms of this Agreement, the prevailing Party shall be entitled to reasonable attorney's fees, costs and necessary disbursements in addition to any other relief to which it may be entitled.

SECTION 19. WARRANTY

CONSULTANT shall perform its services in accordance with generally accepted industry and professional standards. If, within the 12-month period following completion of its services, OC San informs the CONSULTANT that any part of the services fails to meet those standards, the CONSULTANT shall, within the time prescribed by OC San, take all such actions as are necessary to correct or complete the noted deficiency(ies).

SECTION 20. INDEMNIFICATION

To the fullest extent permitted by law, the CONSULTANT shall indemnify, defend (at the CONSULTANT's sole cost and expense and with legal counsel approved by OC San, which approval shall not be unreasonably withheld), protect and hold harmless OC San and all of OC San's officers, directors, employees, consultants, and agents (collectively the "Indemnified Parties"), from and against any and all claims, damages, liabilities, causes of action, suits, arbitration awards, losses, judgments, fines, penalties, costs, and expenses (including, without limitation, attorneys' fees, disbursements and court costs, and all other professional, expert, or CONSULTANT's fees and costs, and OC San's general and administrative expenses) individually, a "Claim" and collectively, "Claims", which may arise from or are in any manner related, directly or indirectly, to any work performed or any operations, activities, or services provided by the CONSULTANT in carrying out its obligations under this Agreement to the extent of the negligent, recklessness, and/or willful misconduct of the CONSULTANT, its principals, officers, agents, employees, CONSULTANT's suppliers, Subconsultants, Subcontractors, and/or anyone employed directly or indirectly by any of them, regardless of any contributing negligence or strict

liability of an Indemnified Party. Notwithstanding the foregoing, nothing herein shall be construed to require the CONSULTANT to indemnify the Indemnified Parties from any Claim arising solely from:

- (A) the active negligence or willful misconduct of the Indemnified Parties; or
- (B) a natural disaster or other act of God, such as an earthquake; or
- (C) the independent action of a third party who is neither one of the Indemnified Parties nor the CONSULTANT, nor its principal, officer, agent, employee, nor the CONSULTANT's supplier, Subconsultant, Subcontractor, nor anyone employed directly or indirectly by any of them.

Exceptions (A) through (B) above shall not apply, and the CONSULTANT shall, to the fullest extent permitted by law, indemnify the Indemnified Parties from Claims arising from more than one cause if any such cause taken alone would otherwise result in the obligation to indemnify hereunder.

The CONSULTANT's liability for indemnification hereunder is in addition to any liability the CONSULTANT may have to OC San for a breach by the CONSULTANT of any of the provisions of this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit the CONSULTANT's indemnification obligation or other liability hereunder. The terms of this Agreement are contractual and the result of negotiation between the Parties. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code section 1654) that ambiguities are to be construed against the drafting Party shall not be employed in the interpretation of this Agreement.

SECTION 21. DUTY TO DEFEND

The duty to defend hereunder is wholly independent of and separate from the duty to indemnify and such duty to defend shall exist regardless of any ultimate liability of the CONSULTANT and shall be consistent with Civil Code section 2782.8. Such defense obligation shall arise immediately upon presentation of a Claim by any person if, without regard to the merit of the Claim, such Claim could potentially result in an obligation to indemnify one or more Indemnified Parties and upon written notice of such Claim being provided to the CONSULTANT. Payment to the CONSULTANT by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition precedent to enforcing such Indemnified Party's rights to indemnification hereunder. In the event a final judgment, arbitration, award, order, settlement, or other final resolution expressly determines that the Claim did not arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONSULTANT, to any extent, then OC San will reimburse the CONSULTANT for the reasonable costs of defending the Indemnified Parties against such Claims.

The CONSULTANT's indemnification obligation hereunder shall survive the expiration or earlier termination of this Agreement until such time as action against the Indemnified Parties for such matter indemnified hereunder is fully and finally barred by the applicable statute of limitations.

SECTION 22. COMPLIANCE WITH OC SAN POLICIES AND PROCEDURES

The CONSULTANT shall be required to comply with all OC San policies and procedures. OC San requires the CONSULTANT and its Subconsultants/Subcontractors to follow and ensure their employees follow all Federal, State, and local regulations as well as OC San's safety standards while working at OC San locations. If during the course of the contract it is discovered that OC San's safety standards do not comply with Federal, State, or local regulations, then the CONSULTANT is required to follow the most stringent regulatory requirement at no additional cost to OC San. The CONSULTANT and all of its employees and Subconsultants/Subcontractors shall adhere to all applicable Contractor Safety Standards attached hereto as Attachment "L".

SECTION 23. GOVERNING LAW

This Agreement shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in Orange County in the event any action is brought in connection with this Agreement or the performance thereof.

SECTION 24. TIME OF ESSENCE

Time is of the essence in the performance of this Agreement.

SECTION 25. CONFLICT OF INTEREST

The CONSULTANT covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of the services contemplated by this Agreement. No person having such interest shall be employed by or associated with the CONSULTANT.

SECTION 26. ENTIRE AGREEMENT

This Agreement constitutes the entire understanding and agreement between the Parties and supersedes all previous negotiations between them pertaining to the subject matter hereof.

[THIS SECTION INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, this Agreement has been executed in the name of OC San and the CONSULTANT by their respective duly authorized officers, as of the date first written above.

KENNEDY/JENKS CONSULTANTS, INC.

By _____ Date _____

Printed Name & Title

ORANGE COUNTY SANITATION DISTRICT

By _____ Date _____
Chad P. Wanke
Board Chairman

By _____ Date _____
Kelly A. Lore
Clerk of the Board

By _____ Date _____
Ruth Zintzun
Finance & Procurement Manager

Attachments: Attachment "A" Sample Scope of Work
Attachment "B" Not Used
Attachment "C" Not Used
Attachment "D" Allowable Direct Costs
Attachment "E" Rates Proposal
Attachment "F" Not Used
Attachment "G" Not Used
Attachment "H" Not Used
Attachment "I" Not Used
Attachment "J" Not Used
Attachment "K" Not Used
Attachment "L" Contractor Safety Standards
Attachment "M" Iran Contracting Act Verification

ATTACHMENT “A”

SAMPLE SCOPE OF WORK

ATTACHMENT "A"

SAMPLE SCOPE OF WORK DESCRIPTION

OC SAN staff will develop detailed scope of work to be included in each Request for Task Order Proposal (RFTOP). The RFTOP will require Consultants to base their proposals on the scope of work included in the RFTOP. The remainder of this document are the templates typically used for design projects. Notes to scope editor are shown, although they will be removed before a scope of work is included in a RFTOP. Yellow highlighted text indicates where project specific information or a hypothetical example is given.

Design Task Order

Attachment A - Scope of Work

1 PROJECT REQUIREMENTS

Provide professional design engineering services for the project described herein.

1.1 BACKGROUND

- A. The Secondary Clarifiers at Plant No. 1 were constructed under Project Nos. P1-16 (1973), P1-36-2 (1995), and P1-82 (2005). A buried ductile iron plant water line around the secondary clarifiers feeds the scum sprayers and hose bibs. Because the plant water chemical composition is so corrosive to ductile iron, many failures have occurred.

1.2 GENERAL PROJECT DESCRIPTION

- A. This project includes the replacement of approximately 1800 feet of existing 6-inch ductile iron buried plant water piping, valves, fittings, and connections.
- B. A location map is provided in **Figure 1**.

[insert location map]

Figure 1 - Project Location Map

1.3 PROJECT ELEMENTS

- A. **Element 1: Piping** – Replace the existing 1,800 feet of 6-inch buried ductile iron plant water piping with new 6-inch plant water piping.
- B. Assumptions for level of effort:
1. 1,600 feet of piping shall be below grade and 200 feet shall be either above or below grade.
 - a. 1,600 feet of piping is located around the Secondary Clarifiers. Assume high-density polyethylene (HDPE) as the pipe material with appropriate dimension ratio value.
 - b. 200 feet of piping will re-route the existing plant water line on the northwest end of the Secondary Clarifiers. Recent projects disconnected the existing plant water line at various locations resulting in an incomplete loop. This piping will reconnect the lines to allow for a complete loop. See Exhibit 13.1 for photos and Exhibit 13.3 for proposed routing design.
 - (1) For above grade pipe material, assume cement-lined ductile iron or fiberglass-reinforced plastic.
 2. Follow existing alignment with new pipe. New alignments shall be kept as close to the existing alignment as feasible.
 - a. The Secondary Effluent Junction Box No. 4 (SEJB-4), located at the southwest corner of the Secondary Clarifiers, is congested with various utilities, such as plant water, secondary effluent, and reclaimed water lines, and associated valves. Follow the existing alignment in this important area.
 - b. Concrete encasement of HDPE, located on the west side of the Secondary Clarifiers on Fuentes Road, was installed under project P1-102 (2006). Assume potholing is necessary to survey the edge of the concrete and confirm the limits of the existing concrete encasement

do not interfere with this project. As much as possible, the new alignment shall avoid the concrete encasement.

1.4 PROJECT SCHEDULE

- A. **Table 1** lists major project deliverables along with Orange County Sanitation District's (OC SAN) review and approval periods. CONSULTANT shall comply with the deadlines indicated in that table. OC SAN will consider an alternative CONSULTANT proposed schedule provided it is consistent with OC SAN resources, schedule constraints, and adds value. The negotiated durations will set the design baseline schedule.

Table 1 – Project Milestones and Deadlines

MILESTONE	DEADLINE
Kickoff Meeting	The kickoff meeting will be scheduled to coincide with the Project Notice to Proceed (NTP).
Preliminary Design Memo (PDM)	[XX] workdays from Preliminary Design Phase NTP.
OC SAN Review of PDM	10 workdays from receipt of PDM.
Submit Design Submittal 3 (DS3)	[YY] workdays from approval of PDM.
OC SAN Review of DS3	15 workdays from receipt of DS3.
Submit Final Design Submittal (FDS)	15 workdays from receipt of OC SAN comments on DS3.
OC SAN Review of FDS	10 workdays from receipt of FDS.
Submit Final Technical Plans and Specifications (FTPS)	15 workdays from receipt of OC SAN comments on FDS.
Total	[ZZZ] workdays

1.5 PROJECT MANAGEMENT

- A. CONSULTANT shall be responsible for managing CONSULTANT's project execution, schedule, budget, subconsultants, and coordination with other projects.
- B. Per **Exhibit 18**, PMWeb will be used for the management of this agreement.
- C. [Monthly Progress Report: Submit monthly progress reports at the same time as monthly invoices that include the following contents:
1. Work activities completed to date, in the current reporting period, and projected for the coming month.
 2. A brief description of outstanding issues and potential cost, schedule, quality impacts.
 3. Potential changes in the project scope or design scope.
 4. Any corrective actions needed to avoid potential impacts.
 5. Budget status: actual costs to date, costs to complete, and costs at completion.
 6. Schedule status: variances between scheduled and forecasted milestone dates.]
- D. Monthly Invoices: Provide a monthly cost report and/or invoices, which shall document the man-hours and billing rate for each person that works on the project, and shall include the following:
1. Budget
 2. Current billing period invoicing
 3. Previous billing period "total invoiced to date"
 4. Budget Amount Remaining
 5. Current billing period "total percent invoiced to date"

1.6 QUALITY CONTROL

- A. Provide Quality Assurance and Quality Control of the work.
- B. Provide documentation upon request that the CONSULTANT has performed a quality control review in-house, and all the comments have been addressed prior to providing any submittals to OC SAN.

1.7 PROJECT MEETINGS

- A. CONSULTANT shall communicate throughout the project to keep OC SAN apprised of the job, review work-in-progress, share information, discuss project submittals, present findings of technical analyses, receive and resolve comments, and obtain decisions and direction by OC SAN staff.
 - 1. **Table 2** below lists the anticipated meetings and site visits. Microsoft Teams shall be used for meetings. CONSULTANT will provide an agenda 2 workdays prior to each meeting. Meeting minutes will be submitted to the OC SAN project manager for review within 3 workdays of the meeting.

Table 2 – Project Assumed Meetings and Site Visits

DESIGN ACTIVITY	MEETINGS	SITE VISITS
Kickoff Meeting	1 (1-hour)	
PDM	Progress meeting (1-hour, every 2 weeks)	8 hours
PDM Workshop	2 (1-hour)	
DS3	Progress meeting (1-hour, every 2 weeks)	8 hours
DS3 Workshop	2 (1-hour)	
FDS	Progress meeting (1-hour, weekly)	
FDS Workshop	1 (1-hour)	
FTPS	Progress meeting (1-hour, weekly)	
Construction Services	6 hours	24 hours
Closeout	4 hours	12 hours

1.8 SUBMITTAL REVIEWS

- A. Deliverables (other than specifications) shall be submitted in searchable PDF format with no hard copy. Deliverables shall be bookmarked and hyperlinked for navigation per **Exhibit 14**.
- B. OC SAN has standardized on the use of Bluebeam Revu for reviewing and providing comments to PDF files. The purpose of the studio session is to provide review and collaboration. OC SAN staff will create the Bluebeam studio session, invite attendees, configure, and manage the studio session. Make drawing submittals in Bluebeam and respond to OC SAN comments in Bluebeam per **Exhibit 15**.

1.9 SPECIFICATIONS

- A. Prior to preparing or editing specifications, CONSULTANT shall meet with OC SAN staff to determine which OC SAN and CONSULTANT provided specifications should be included in the design. After discussions, all specifications should be loaded in Microsoft Teams (Teams) early in design and prior to editing for DS3.
- B. Tailor all specifications to project and remove requirements that do not apply.
- C. Unless a CONSULTANT is using their own specification management software, Specifications should remain in Teams for editing throughout design. Make all edits to specifications hosted in Teams. Unless agreed to, Specifications should not be removed from Teams or edited elsewhere.
- D. Provide specifications as Microsoft Word (Word) files with Track Changes enabled throughout design.

- E. OC SAN staff will review specifications during submittal review periods. CONSULTANT shall respond to OC SAN comments using Word “Reply” and “Resolve.” CONSULTANT shall “Reply” to each OC SAN comment describing how the comment will be addressed and revise the specification, as needed, to address the comment. “Resolve” will be used by the reviewer or designee to confirm their comment has been addressed. For more information see **Exhibit 16**.
- F. Prior to advertisement, all Word comments and revisions shall be Track Changes accepted, rejected, resolved, or deleted by OC SAN staff prior to bid.

2 PRELIMINARY DESIGN

All significant material and equipment decisions are to be made before the start of Design. At the end Preliminary Design, major design elements shall be fixed, and major equipment, footprints, and utility connection locations shall be well established. The extent of the design and the number and type of drawings shall also be established.

2.1 PRELIMINARY DESIGN AND PDM

- A. The PDM shall consist of a PowerPoint presentation. Present PDM findings and recommendations to OC SAN in a stakeholder meeting using the PowerPoint presentation mentioned in this section for consensus before the start of Design.
- B. Identify any equipment that has one competitive supplier (i.e., sole source). In those cases, recommend an appropriate procurement strategy compatible with California Law and OC SAN policies.
- C. Develop 2 conceptual design alternatives for the plant water piping alignment.
 - 1. Alternatives:
 - a. Reuse exiting alignment and existing points of connection
 - b. Alternate alignment along tunnels in and around secondary clarifiers
 - 2. Perform the following with each alternative:
 - a. Cost, benefit, and life cycle analysis.
 - b. Identify plant water construction shutdown requirements with estimated durations.
 - c. Identify construction access requirements and limitations.
 - d. Prepare preliminary drawings (sketches).
 - 3. Discuss the available alternatives with OC SAN. The PDM shall include the recommendation alternative.
- D. Prepare drawings showing:
 - 1. Proposed alignment of piping
 - 2. Proposed piping materials and quantities
 - 3. Proposed quantity and type of valves and valve cans
 - 4. Proposed connection points which include the following:
 - a. New replacement pipes connecting to existing main plant water line
 - b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
 - 5. Demolition of existing ductile iron pipes and valves
 - 6. Proposed design of new valves and valve cans
 - 7. Proposed design of connection points
 - a. New replacement pipes connecting to existing main plant water lines

- b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
- 8. Proposed design of pipe supports by typical detail and max spacing table
- E. Summarize key constructability and construction sequencing constraints.
 - 1. Develop process flow schematic of the components of the plant water system at Plant No. 1 that impact the pipelines being replaced.
- F. Prepare preliminary construction schedule.
- G. Prepare P&IDs: Fully detailed for each design "module", e.g., 1 pump set typical of all with proposed tagging strategy.
- H. Perform any potholing activities required for the concrete encasement survey specified under Element 1.
- I. Quantify soil contamination by determining the volume of excavation work needed to perform the Work. Coordinate with OC SAN ENGINEER to determine the area of excavation. Soil testing is not necessary.
- J. Develop testing requirements. Assume:
 - 1. Pressure leak and valve testing shall be included.
 - 2. Plant water operating pressure is 110 PSI.

2.2 PRELIMINARY DESIGN CONSTRUCTION COST ESTIMATE

- A. Prepare an AACE International Class 3 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01. Data used to prepare the cost estimate shall be included as an attachment to the PDM.
 - 1. Determine project specific and appropriate values to use for the percentages for profit, bond, and insurance.
 - 2. Costs for project level allowance, insurance, profit, and bond shall be cumulative and listed as individual line items.
 - 3. Allowances or mark ups should be well explained and itemized.
 - a. Include "Market Volatility" allowance of xx%.(revise based on the market conditions)
 - b. Do not setup allowance for change orders.
 - c. Do not escalate to midpoint of construction - this is by OC SAN.
 - 4. Specialty work should be recently (under 6 months) estimated by vendor.
 - a. For example, sewer bypassing services should be estimated by vendor (i.e., Rain 4 Rent).
 - b. Provide vendor quotes for high-cost equipment.
 - c. Minor equipment costs may be documented by written telephone quotations.
 - 5. Provide breakdown of lump sum costs.
 - 6. Show labor rates so they can be checked.
 - 7. Provide all back back up for all documentation obtained for the cost estimate purposes. The cost estimate back up shall have the date and the vendor name/contact name. If catalog price is used, provide the year of that publication.
- B. Prepare estimate of construction duration. The suggested construction duration shall take in considerations the verifiable lead time for all equipment.

3 DESIGN

Prepare biddable plans, technical specifications, other Bid Documents, and any associated design calculations, required to complete the Project Elements.

3.1 DS3 DELIVERABLES

- A. Meet at a 50% completion level with OC SAN staff to review design progress. Formal deliverables are not necessary. QA/QC is also not required for this preview.
- B. At this submittal, the design is essentially finished and submitted as complete. DS3 shall include all finished and checked plans and specifications. OC SAN staff will review DS3 and provide comments to the drawings and specifications. The CONSULTANT should be finished with no remaining design work except for OC SAN comments provided at DS3 review and their incorporation at FDS.
- C. [Prepare construction drawings in CAD conforming to OC SAN's CAD Manual. A CAD compliance check will be performed at DS3 (Exhibit 17, Chapter 8 explains the CAD compliance check, and Appendix D contains the "CAD Standards Compliance Checklist" summarizing all items checked by OC SAN). OC SAN will provide base layers and utilities for Work locations within the treatment plant boundaries.]

3.2 DS3 COST ESTIMATE

- A. Prepare an AACE International Class 2 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01 based on the DS3 design. Data used to prepare the cost estimate shall be included as an attachment to DS3.
- B. Prepare estimate of construction duration.

3.3 FDS DELIVERABLES

- A. Final Design Submittal (FDS) is for OC SAN to confirm all comments from DS3 have been addressed and incorporated and add any additional comments.

3.4 FTSP DOCUMENTS

- A. Final Technical Plans and Specifications is for the CONSULTANT to address and incorporate all comments and provide all necessary stamps and signatures for a complete bid package suitable for advertisement by OC SAN.

3.5 CONSTRUCTION COST ESTIMATE "ENGINEER'S ESTIMATE"

- A. 30 calendar days prior to advertisement, refresh the DS3 Class 2 cost estimate. Get updated vendor quotes used to prepare the DS3 cost estimate. This will become the Engineer's Estimate published in the front-end documents.

3.6 PERMITTING ASSISTANCE ([ALLOCATE 60 HOURS] [NOT INCLUDED IN THIS AGREEMENT])

- A. [For all applicable Project Elements of this Scope of Work, provide Bid Documents that ensure that the design complies with all conditions of existing permits and permits required to construct and implement this project. Testing, construction drawings, specifications, and supplemental drawings shall be prepared, as necessary, in the format required to obtain all permits.]
- B. Assist OC SAN in obtaining permits. This assistance shall include identifying applicable permits, completing required design, plan preparation, application forms provided by OC SAN, preparing supporting documentation for the permit applications as required by the issuing agency, furnishing the required number of copies of all construction drawings and exhibits, and attend meetings with permitting agencies at the request of OC SAN.
- C. Except for construction contractor-furnished permits, OC SAN staff will execute all applications. CONSULTANT shall determine the cost and requirements of all permits. All permit fees will be paid directly by OC SAN and will not be part of CONSULTANT's fee.
- D. Submit all supporting documentation in a timely fashion for all permits required for this project as described below.
 - 1. Caltrans Encroachment Permits

- a. Determine if encroachment permits or other types of permits are required by Caltrans for the design and construction phases. Provide the work necessary to obtain such permits including coordinating and attending meetings.

2. City/County Encroachment Permits

- a. Provide coordination, work effort, and attend meetings, as required, to obtain encroachment permits from each city and agency who has jurisdiction. Process the plans through the cities and agencies for approval, revise plans, and meet with them, as required, to obtain approval.]

3.7 BID SUPPORT SERVICES

- A. Provide answers to bidder's questions related to the design. Provide revisions to specifications and drawings when needed for addendum.
- B. Within 2 weeks of the bid opening date, prepare conformed document set (drawings, databases, specification, and other required materials) that incorporates the addenda. See requirements of OC SAN's CAD Manual.

3.8 POPULATE PMWEB LIST OF SUBMITTALS (ALLOCATE 24 HOURS)

- A. PMWeb is used to manage communication with the contractor. OC SAN uses an Excel template to populate the list of all submittals. The CONSULTANT shall review each project specification and complete the Submittal Items Template as follows:
 1. Enter the list of project specifications.
 2. Enter the list of commissioning packages. Commissioning packages are defined by Section 01810, Commissioning.
 3. Enter the following information for each submittal item.
 - a. Specification section: enter the specification section requiring the submittal.
 - b. Submittal Item description: enter the description of the submittal. Submittal items that refer to multiple specifications shall include referenced specification sections in brackets.
 - c. Comments: enter notes, comments, or clarifications. This field is optional.
 - d. Commissioning package: enter the commissioning package of the submittal item. Submittal items shall be duplicated when the same submittal is required for multiple commissioning packages. Items shall be separated into mobilization, general construction, or a commissioning package defined by the project specifications.
 - e. Phase: Identify which phase each submittal is required to be approved.
 - f. Retention: Specify if the submittal is a Project File or Facility Record based on OC SAN's Records Retention Policy.
 - g. Lead time: Specify the appropriate number of workdays that OC SAN has to review the particular submittal.
 - h. Load: Specify if the submittal should be loaded into PMWeb prior to NTP, upon contractor approval, or prior to the start of commissioning.
- B. OC SAN will provide a PMWeb Master Submittal Items template that includes the submittals required by OC SAN's Master Specifications. The CONSULTANT shall not deviate from the Master PMWeb Submittal Items, except as required by the project specific specifications. The CONSULTANT shall develop submittal items for specifications that are not part of OC SAN's Master Specifications.
- C. OC SAN will provide a 1-hour virtual training on the use of the PMWeb Master Submittal Items Template.
- D. The CONSULTANT shall populate, receive comments, address comments, and provide completed submittal form as follows:
 1. 20 workdays after advertisement date.

3.9 SAFETY AND RISK MEETING

- A. Ensure that an OC San Risk Management safety and security professional has been assigned to the project.
- B. CONSULTANT shall prepare and meet with OC San Risk Management personnel at all design stages to review Exhibit 11 Sample Full Project Safety Review Plan and Exhibit 12 Sample Risk Management Check List. This shall be completed in accordance with Exhibit 4 Risk Management Requirements.
- C. CONSULTANT shall update Exhibits 11 and 12 throughout the design phases. CONSULTANT shall provide OC San Risk Management with the final copies of Exhibit 11 and Exhibit 12 at completion of the Design Project.

4 CONSTRUCTION SERVICES

OC SAN will administer and provide field inspection for construction contracts. Construction and installation support services shall be provided by the CONSULTANT on an as-needed basis and as requested by OC SAN. The services are indicated below.

4.1 SUBMITTAL REVIEWS (ALLOCATE 15 HOURS)

- A. OC SAN will manage submittal review. The CONSULTANT shall use PMWeb to review and return comments to OC SAN. Return comments within 5 workdays.

4.2 REQUESTS FOR INFORMATION (RFIS) (ALLOCATE 15 HOURS)

- A. OC SAN will manage the processing of RFI's. When requested by OC SAN, CONSULTANT shall return written responses to OC SAN within 5 workdays of receipt of RFI using PMWeb. Generate necessary sketches, figures, and modifications to the drawings for clarifications.

4.3 PROGRESS MEETINGS AND SITE VISITS

- A. Refer to **Table 2**.

4.4 RECORD DRAWINGS

- A. Verify that the Contractor's As-Built set correctly reflects the information included in the approved shop drawings, RFIs, approved Field Change Orders, plan clarifications, plan changes, and other deviations from the conformed drawings, and that the information in the set is complete.
- B. Draft Record Drawings shall be submitted to OC SAN within 4 weeks of receipt from OC SAN of the approved Contractor's As-Built drawings. The Final Record Drawings shall be submitted within one week of receipt of OC SAN comments on the Draft Record Drawings.
- C. Prepare Draft Record Drawings based on the Final Field Markup Set for all drawings in accordance with the requirements in the CAD Manual. Submit the Draft Record Drawings to the OC SAN Resident Engineer. The Draft Record Drawings will be reviewed for content and CAD compliance by OC SAN staff. If no comments are identified, CONSULTANT shall prepare the Final Record Drawings and submit them along with the Contractor's field markup set to the Project Manager. For content and placement of record drawing stamp, see CAD Manual.
- D. Submit an electronic copy of the record drawings to OC SAN for review and approval. The acceptance of the record drawings shall be deemed a condition for completion of work.
- E. Contractor-generated drawings described in the Design Guidelines and the shop drawings will not be updated by CONSULTANT. The format and quantities for delivery of the submittals shall be listed below:

Contents	Draft Record Drawings	Final Record Drawings
All related electronic files, including CAD and compiled PDFs.	One copy to be uploaded to Microsoft Teams.	One copy to be uploaded to Microsoft Teams.

4.5 EQUIPMENT INFORMATION DATABASE (EID) (ALLOCATE [X] HOURS [NOT INCLUDED IN THIS AGREEMENT])

- A. OC SAN uses Maximo software to manage and track asset information. When new assets are added or existing assets are modified by a project, an EID Excel spreadsheet is used to populate or update Maximo asset information. CONSULTANT shall meet with OC SAN EIM staff to request an EID spreadsheet pre-populated with the new or modified assets. OC SAN staff will provide training on how to populate the EID spreadsheet. Field work will be needed to apply equipment tags and record equipment nameplate information and serial numbers to populate the EID. Coordinate with Maintenance Specialists (David Haug or designee, Div. 870) to walk new facilities to verify accuracy of P&IDs and EID.

4.6 [UPDATE BASELINE DRAWINGS]

5 STAFF ASSISTANCE

OC SAN staff member or designee assigned to work with CONSULTANT on the design of this project is Jessica Cheung. Phone (714) 593-7147, e-mail jcheung@ocsan.gov.

6 EXHIBITS

- A. Exhibits 1-3, 5-10 – Not Used
- B. Exhibit 4 – Risk Management Requirements
- C. Exhibit 11 – Sample Full Project Safety Review Plan
- D. Exhibit 12 – Sample Risk Management Checklist
- E. Exhibit 13 – Project Reference Material
 - a. 13.1 – Photos
 - b. 13.2 – Plant 1 Plant Water System Map
 - c. 13.3 – Proposed Design Idea (The CONSULTANT may start with this conceptual design.)
 - d. 13.4 – Proposed Valve Cans (The CONSULTANT may start with this conceptual design.)
 - e. 13.5 – Record Drawings (Available Upon Request)
 - (1) P1-82, Activated Sludge Plant Rehabilitation (2005)
 - (2) P1-36-2, Secondary Treatment Improvements at Plant No. 1 (1995)
 - (3) P1-16, 46 MGD Activated Sludge Plant at Reclamation Plant No. 1 (1973)
 - (4) P1-102, Secondary Activated Sludge Facility 2 at Plant No.1 (2006)
- F. Exhibit 14 – BlueBeam Designer Training for Submission
- G. Exhibit 15 – BlueBeam Designer User Training
- H. Exhibit 16 – Spec Review using Microsoft Word and Teams
- I. Exhibit 17 – [CAD Standard Manual](#)
- J. Exhibit 18 – PMWeb

JC:tk

PROFESSIONAL DESIGN SERVICES AGREEMENT

This PROFESSIONAL DESIGN SERVICES AGREEMENT (Agreement), to be effective this 1st day of July, 2024, is made and entered into by and between:

ORANGE COUNTY SANITATION DISTRICT
hereinafter referred to as "OC San"

AND

KLEINFELDER, INC.
hereinafter referred to as "CONSULTANT"

individually referred to as the "Party" and collectively as the "Parties".

RECITALS

WHEREAS, in accordance with Ordinance No. OC SAN-61 and pursuant to a Request for Qualifications ("Underlying RFQ"), the Board of Directors of OC San, by action on May 22, 2024, approved the award of the Agreement for **CONTRACT NO. FE24-00-10**, to CONSULTANT to provide services for selected projects on a task order (Task Order) basis from July 1, 2024 to June 30, 2027; and

WHEREAS, consistent with the Underlying RFQ, the CONSULTANT has been prequalified to perform services for the following project type: Project Type 2: Linear and Collections; and

WHEREAS, for Task Orders estimated to cost \$100,000 or less, the Director of Engineering, with concurrence of the Purchasing Manager, may solicit a proposal from one (1) firm on the prequalified list, which will include the project types for which the consultants are prequalified; and

WHEREAS, the CONSULTANT is qualified to provide and has agreed to provide the necessary professional engineering and related services under this Agreement; and

WHEREAS, by this Agreement, the Parties intend to set forth the general terms and conditions that will apply to any specific project for which CONSULTANT is given a Task Order by OC San.

NOW, THEREFORE, OC San and the CONSULTANT mutually agree as follows:

SECTION 1. SCOPE OF AGREEMENT

OC San, at its sole discretion, may, from time to time during the term of this Agreement, issue a Request for Task Order Proposal ("RFTOP") setting forth the detailed requirements and scope of work to be performed on the identified project and thereafter, upon receipt of a proposal from the CONSULTANT, may issue a Task Order to proceed with the work. The scope of work will be in a form attached hereto as Attachment "A" – Sample Scope of Work.

Upon execution by OC San, the Task Order shall become an operative part of this Agreement. Should any conflict or inconsistency exist in the contract documents identified in this section, the conflict or inconsistency shall be resolved by applying the provisions in the highest priority document, which shall be determined in the following order of priority:

1. Agreement and any amendments thereto
2. the Task Order
3. the RFTOP

SECTION 2. TASK ORDER ISSUANCE BY OC SAN

The Task Order issued by OC San shall, specifically or by reference to the RFTOP and corresponding proposal, set forth the terms that will apply to the specific project for which the services will be rendered. Those terms shall include, but not be limited to, scope of work, time for performance, and compensation.

SECTION 3. TERM

This Agreement shall commence on the effective date of this Agreement and terminate on June 30, 2027, unless further extended by written agreement signed by the Parties. Any work that is required by a Task Order and is not finished by the date of termination shall be continued and completed by the CONSULTANT and the terms and conditions of this Agreement shall continue in effect for that time. OC San may, at its option, renew this Agreement for two (2) additional terms of one (1) year each, for a maximum contract duration of five (5) years.

SECTION 4. COMPENSATION

The total compensation payable to the CONSULTANT pursuant to this Agreement shall not exceed One Million Dollars (\$1,000,000) per year in accordance with the terms described in SECTION 3 - TERM. The compensation includes, but is not limited to, fees for professional engineering services based on the CONSULTANT's burdened labor rates, overhead, and profit, and fees from the CONSULTANT's subconsultants/subcontractors (Subconsultants/Subcontractors). The specific amount of compensation payable to the CONSULTANT for services rendered on an individual project, pursuant to a Task Order, shall be established for each Task Order and shall not exceed Five Hundred Thousand Dollars (\$500,000) per individual Task Order unless authorized by OC San's Board of Directors. The CONSULTANT agrees and acknowledges that the execution of this Agreement does not in any way guarantee that a Task Order will be issued to the CONSULTANT. Moreover, execution of this Agreement shall not entitle the CONSULTANT to any form of payment or compensation from OC San without OC San first having issued a written Task Order.

A. Total Compensation

Total compensation for any Task Order shall not exceed the amount indicated in the approved Task Order and any approved amendments thereto.

B. Labor

As a portion of the total compensation to be paid to CONSULTANT, OC San shall pay to CONSULTANT a sum equal to the burdened salaries (salaries plus benefits) actually paid

by CONSULTANT charged on an hourly-rate basis to the project and paid to CONSULTANT's personnel. For each Task Order, the cost of benefits for CONSULTANT shall be based on the fringe rates identified in Attachment "E" – Rates Proposal. Upon request of OC San, CONSULTANT shall provide OC San with certified payroll records of all employees' work that is charged to the project.

C. Overhead

As a portion of the total compensation to be paid to CONSULTANT, for each Task Order, OC San shall compensate CONSULTANT for overhead at the rates equal to the percentage of burdened labor as specified in Attachment "E" – Rates Proposal.

D. Profit

For each Task Order, profit shall be ten percent (10%) of burdened labor and overhead for all CONSULTANT fees and its Major Subconsultants (Architecture & Engineering [A&E] consulting services) whose fees for services are greater than or equal to \$100,000. Profit shall remain fixed through the term of this Agreement, inclusive of any renewals identified in Section 3 – TERM.

As a portion of the total compensation to be paid to CONSULTANT and its Major Subconsultants, OC San shall pay profit for all services rendered by CONSULTANT and its Major Subconsultants for the Task Order as specified in the previous paragraph.

E. Subconsultants

For each Task Order, any Minor Subconsultant (A&E consulting services) whose fees for services are less than \$100,000 and any Subconsultant/Subcontractor (non-A&E consulting services), CONSULTANT shall pay to Subconsultant/Subcontractor total compensation based on an established hourly rate schedule by personnel classification. The hourly rates shall cover burdened salary costs, overhead and profit. The compensation for each Minor Subconsultants and Subconsultants/Subcontractors (non-A&E consulting services), including both labor related fees, and direct costs shall not exceed the amount, as negotiated prior to award of a Task Order.

For each Task Order, any Major Subconsultant (A&E consulting services) whose fees for services are greater than or equal to \$100,000, total compensation for labor will be based on burdened labor rates, overhead, and profit, as negotiated prior to award of Task Order. Prior to award of Task Order, the CONSULTANT shall provide to OC San, if available, an audit performed for another public agency which documents the Major Subconsultant's labor burden rate and overhead rate. This audit shall be the most current available and have been conducted for a period that ended within twelve months of the task order proposal due date. This information shall be provided by CONSULTANT within ten (10) business days from request by OC San.

F. Direct Costs

OC San shall reimburse CONSULTANT and its Subconsultants/Subcontractors the actual costs of permits and associated fees, travel, licenses, and other services in an amount not to exceed the sums set forth in each approved Task Order. OC San shall also pay to

CONSULTANT actual costs for equipment rentals, leases or purchases with prior written approval of OC San. Upon request, CONSULTANT shall provide to OC San receipts and other documentary records to support CONSULTANT's request for reimbursement of these amounts, refer to Attachment "D" – Allowable Direct Costs. All incidental expenses shall be included in the overhead cost pursuant to this SECTION 4 – COMPENSATION.

G. Other Direct Costs

OC San will reimburse the CONSULTANT for Other Direct Costs incurred by CONSULTANT and its Subconsultants/Subcontractors due to modifications in the scope of work resulting from field investigations and field work required by the Task Order. These items may include special equipment, test equipment and tooling, and other materials and services not previously identified. Refer to Attachment "D" – Allowable Direct Costs for payment information.

H. Reimbursable Direct Costs

OC San will reimburse the CONSULTANT for reasonable travel and business expenses as described in this section and further described in Attachment "D" – Allowable Direct Costs. The reimbursement of the above-mentioned expenses will be based on an "accountable plan" as considered by the Internal Revenue Service (IRS). The plan includes a combination of reimbursements based upon receipts and a "per diem" component approved by the IRS. The most recent schedule of the per diem rates utilized by OC San may be found on the U.S. General Services Administration website at <https://www.gsa.gov/travel/plan-book/per-diem-rates>.

The CONSULTANT shall be responsible for the most economical and practical means of management of reimbursable costs inclusive, but not limited to, travel, lodging, and meals arrangements. OC San shall apply the most economic and practical method of reimbursement which may include reimbursements based upon receipts and/or "per diem" as deemed the most practical.

CONSULTANT shall be responsible for returning to OC San any excess reimbursements after the reimbursement has been paid by OC San.

Travel and travel arrangements – Any travel involving airfare, overnight stays, or multiple day attendance must be approved by OC San in advance.

Local travel is considered travel by the CONSULTANT within OC San general geographical area which includes Orange, Los Angeles, Ventura, San Bernardino, Riverside, San Diego, Imperial, and Kern Counties. Automobile mileage is reimbursable if CONSULTANT is required to utilize a personal vehicle for local travel.

Lodging – Overnight stays will not be approved by OC San for local travel. However, under certain circumstances overnight stay may be allowed at the discretion of OC San based on reasonableness of meeting schedules and the amount of time required for travel by the CONSULTANT. Such determination will be made on a case-by-case basis and at the discretion of OC San.

Travel Meals – Per diem rates as approved by the IRS shall be utilized for travel meals reimbursements. Per diem rates shall be applied to meals that are appropriate for travel times. Receipts are not required for the approved meals.

Additional details related to the reimbursement of the allowable direct costs are provided in Attachment “D” – Allowable Direct Costs.

I. Limitation of Costs

If, at any time, CONSULTANT estimates the cost of performing the services described in CONSULTANT's proposal will exceed seventy-five percent (75%) of the not to exceed amount of the Task Order, including any approved additional compensation, CONSULTANT shall notify OC San immediately, in writing. The written notice shall indicate the additional amount necessary to complete the services. Any cost incurred in excess of the approved not to exceed amount, without the express written consent of OC San's authorized representative, shall be at CONSULTANT's own risk. This written notice shall be provided separately from, and in addition to, any notification requirements contained in the CONSULTANT's invoice and monthly progress report. Failure to notify OC San that the services cannot be completed within the authorized not to exceed amount of a Task Order is a material breach of this Agreement.

J. Method of Payment:

The CONSULTANT shall submit for approval by OC San, monthly invoices based on the total services which have been satisfactorily completed and specifying a percentage of completion. The CONSULTANT's billings shall be certified for payment by OC San only after OC San has determined that the CONSULTANT has completed each applicable project task. OC San will pay approved invoices within thirty (30) days of receipt and approval by OC San of the payment request. OC San will notify CONSULTANT within fifteen (15) days following receipt of an invoice, if any corrections to the invoice are required from the CONSULTANT and if OC San does not approve all or part of an invoice.

CONSULTANT shall submit separate invoices for each Task Order on a monthly basis.

CONSULTANT understands that submitted costs are subject to Section 11 - AUDIT PROVISIONS, below.

K. Task Order Completion

Upon satisfactory completion by CONSULTANT of the work called for under the terms of the Task Order and upon acceptance of such work by OC San, CONSULTANT will be paid the unpaid balance of any money due for such work.

Upon satisfactory completion of the work performed under each Task Order and prior to final payment under each Task Order for such work or prior settlement upon termination of this Agreement, and as a condition precedent thereto, CONSULTANT shall execute and deliver to OC San a release of all payment claims against OC San arising under or by virtue of this Agreement other than such claims, if any, as may be specifically exempted by CONSULTANT from the operation of the release in stated amounts to be set forth therein.

L. False Claims

Pursuant to the California False Claims Act (Government Code Sections 12650-12655), any CONSULTANT that knowingly submits a false claim to OC San for compensation under the terms of this Agreement may be held liable for treble damages and up to a Ten Thousand Dollars (\$10,000) civil penalty for each false claim submitted. This section shall also be binding on all Subconsultants/Subcontractors.

The CONSULTANT or its Subconsultants/Subcontractors shall be deemed to have submitted a false claim when the CONSULTANT or its Subconsultants/Subcontractors: (a) knowingly presents or causes to be presented to an officer or employee of OC San a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by OC San; (c) conspires to defraud OC San by getting a false claim allowed or paid by OC San; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to OC San; or (e) is a beneficiary of an inadvertent submission of a false claim to OC San and fails to disclose the false claim to OC San within a reasonable time after discovery of the false claim.

M. California Department of Industrial Relations (DIR) Registration and Record of Wages:

To the extent the CONSULTANT's employees and/or its Subconsultants/Subcontractors who will perform work during the design, preconstruction, and construction phases of a construction contract for which Prevailing Wage Determinations have been issued by the DIR and as more specifically defined under Labor Code Section 1720 et seq., CONSULTANT and its Subconsultants/Subcontractors shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4, the work is subject to compliance monitoring and enforcement by the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776 and shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Penalties for non-compliance with the requirements of Labor Code section 1776 may be deducted from progress payments per Labor Code section 1776.

Pursuant to Labor Code section 1776, the CONSULTANT and its Subconsultants/Subcontractors shall furnish a copy of all certified payroll records to OC San and/or general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 16461(e).

N. Record of Expenses:

The CONSULTANT shall keep complete and accurate records of all costs and expenses incidental to services covered by this Agreement. Such records will be made available to OC San upon request.

O. Reallocation of Total Compensation:

OC San, by its Director of Engineering, shall have the right to approve a reallocation of the incremental amounts constituting the total compensation payable under the Task Order, provided that the total compensation for the Task Order is not increased.

SECTION 5. LIMITATIONS UPON SUBCONTRACTING AND ASSIGNMENT

The CONSULTANT shall not contract with any other person or entity to perform the services required without the written approval of OC San. This Agreement may not be assigned voluntarily or by operation of law without the prior written approval of OC San. If the CONSULTANT is permitted to subcontract any part of this Agreement by OC San, the CONSULTANT shall be responsible to OC San for the negligent acts and omissions of its Subconsultant/Subcontractor, as it is for persons directly employed by the CONSULTANT. Nothing contained in this Agreement shall create any contractual relationship between any Subconsultant/Subcontractor and OC San. All persons engaged in the work will be considered employees of the CONSULTANT. OC San will deal directly with and will make all payments to the CONSULTANT.

SECTION 6. CHANGES TO SCOPE OF WORK

In the event of a change in the scope of work as requested by OC San or any other changes to the Task Order, the Parties shall execute an amendment to the Task Order setting forth with particularity all new terms of the Task Order, including, but not limited to, any additional compensation.

SECTION 7. DOCUMENT OWNERSHIP – CONSULTANT PERFORMANCE

- A. All documents in all forms (electronic, paper, etc.), including, but not limited to, studies, sketches, drawings, computer printouts, disk files, and electronic copies prepared in connection with or related to the scope of work shall be the property of OC San. OC San's ownership of these documents includes use of, reproduction or reuse of, and all incidental rights, whether or not the work for which they were prepared has been performed. OC San's ownership entitlement arises upon payment or any partial payment for work performed and includes ownership of any and all work product completed prior to that payment. This section shall apply whether the CONSULTANT's services are satisfied by the completion of the Agreement or are terminated in accordance with other provisions of this Agreement. Notwithstanding any other provision of this section or Agreement, the CONSULTANT shall have the right to make copies of all such plans, studies, sketches, drawings, computer printouts and disk files, and specifications.
- B. CONSULTANT shall not be responsible for damage caused by subsequent changes to or uses of the deliverables where the subsequent changes or uses are not authorized or approved by CONSULTANT, provided that the service rendered by CONSULTANT was not a proximate cause of the damage.
- C. Copies of Work Product

Upon completion of the work required for each Task Order, the CONSULTANT shall deliver to OC San the number of copies specified in the specific Task Order scope of work

of the final report containing the CONSULTANT's findings, conclusions, recommendations, and all supporting documentation and/or final design drawings and specifications. Each Task Order will define the requirements for the deliverables.

SECTION 8. INSURANCE

A. General:

- i. Insurance shall be issued and underwritten by insurance companies acceptable to OC San.
- ii. Insurers must have an "A-" Policyholder's Rating, or better, and Financial Rating of at least Class VIII, or better, in accordance with the most current A.M. Best's Guide Rating. However, OC San will accept State Compensation Insurance Fund for the required policy of Worker's Compensation Insurance subject to OC San's option to require a change in insurer in the event the State Fund financial rating is decreased below "B". Further, OC San will require CONSULTANT to substitute any insurer whose rating drops below the levels herein specified. Said substitution shall occur within twenty (20) days of written notice to CONSULTANT by OC San or its agent.
- iii. Coverage shall be in effect prior to the commencement of any work under this Agreement.

B. General Liability:

The CONSULTANT shall maintain during the life of this Agreement, including the period of warranty, Commercial General Liability Insurance written on an occurrence basis providing the following minimum limits of liability coverage: Two Million Dollars (\$2,000,000) per occurrence with Four Million Dollars (\$4,000,000) aggregate. If aggregate limits apply separately to this Agreement (as evidenced by submission of ISO form CG 25 03 or CG 25 04), then the aggregate limit may be equivalent to the per occurrence limit. Said insurance shall include coverage for the following hazards: Premises-Operations, blanket contractual liability (for this Agreement), products liability/completed operations (including any product manufactured or assembled), broad form property damage, blanket contractual liability, independent contractors liability, personal and advertising injury, mobile equipment, and cross liability and severability of interest clauses. A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement(s). If requested by OC San and applicable, XCU coverage (Explosion, Collapse and Underground) and Riggers/On Hook Liability must be included in the General Liability policy and coverage must be reflected on the submitted Certificate of Insurance.

C. Umbrella Excess Liability:

The minimum limits of general liability and automobile liability insurance required, as set forth herein, shall be provided for through either a single policy of primary insurance or a combination of policies of primary and umbrella excess coverage. Umbrella excess liability coverage shall be issued with limits of liability which, when combined with the primary insurance, will equal the minimum limits for general liability and automobile liability.

D. Automobile/Vehicle Liability Insurance:

The CONSULTANT shall maintain a policy of automobile liability insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and other vehicles providing the following minimum limit of liability coverage: combined single limit of One Million Dollars (\$1,000,000). A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement.

E. Drone Liability Insurance:

If a drone will be used, drone liability insurance must be maintained by the CONSULTANT in the amount of One Million Dollars (\$1,000,000) in a form acceptable to OC San.

F. Worker's Compensation Insurance:

The CONSULTANT shall provide such Workers' Compensation Insurance as required by the Labor Code of the State of California in the amount of the statutory limit, including Employer's Liability Insurance with a minimum limit of One Million Dollars (\$1,000,000) per occurrence. Such Worker's Compensation Insurance shall be endorsed to provide for a waiver of subrogation in favor of OC San. A statement on an insurance certificate will not be accepted in lieu of the actual endorsements unless the insurance carrier is the State of California Insurance Fund and the identifier "SCIF" and applicable endorsements are referenced on the certificate of insurance. If an exposure to Jones Act liability may exist, the insurance required herein shall include coverage for Jones Act claims.

G. Errors and Omissions/Professional Liability:

The CONSULTANT shall maintain in full force and effect, throughout the term of this Agreement, standard industry form professional liability/errors and omissions insurance coverage with coverage limits of not less than Two Million Dollars (\$2,000,000) in accordance with the provisions of this paragraph. If the policy of insurance is written on a "claims made" basis, said policy shall be continued in full force and effect at all times during the term of this Agreement and for a period of five (5) years from the date of the completion of the services hereunder.

In the event of termination of said policy during this period, the CONSULTANT shall obtain continuing insurance coverage for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement. Said coverage shall be evidenced by either a new policy evidencing no gap in coverage or by separate extended "tail" coverage with the present or new carrier.

In the event the present policy of insurance is written on an "occurrence" basis, said policy shall be continued in full force and effect during the term of this Agreement or until completion of the services provided for in this Agreement, whichever is later. In the event of termination of said policy during this period, new coverage shall be obtained for the required period to insure for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement.

The CONSULTANT shall provide to OC San a certificate of insurance in a form acceptable to OC San indicating the deductible or self-retention amounts and the expiration date of said policy and shall provide renewal certificates not less than ten (10) days prior to the expiration of each policy term.

H. Proof of Coverage:

The CONSULTANT shall furnish OC San with original certificates and amendatory endorsements effecting coverage. Said policies and endorsements shall conform to the requirements herein stated. All certificates and endorsements must be received and accepted by OC San before work commences. OC San reserves the right to require, at any time, complete, certified copies of all required insurance policies, including endorsements, effecting the coverage required. The following are approved forms that must be submitted as proof of coverage:

- | | |
|--|--|
| • Certificate of Insurance | ACORD Form 25 or other equivalent Certificate of Insurance form |
| • Additional Insurance (General Liability) | The combination of (ISO Forms) CG 2010 <u>and</u> CG 2037 |
| | All other additional insured endorsements must be submitted for approval by OC San and OC San may reject alternatives that provide different or less coverage to OC San. |
| • Additional Insured (Auto Liability) | Submit Endorsement provided by carrier for OC San's approval. |
| • Waiver of Subrogation | Submit workers' compensation waiver of subrogation endorsement provided by carrier for OC San's approval. |
| • Cancellation Notice | No endorsement is required. However, Vendor/Contractor is responsible for notifying OC San of any pending or actual insurance policy cancellation, as described in Article I. Cancellation and Policy Change Notice below. |

I. Cancellation and Policy Change Notice:

The CONSULTANT is required to notify OC San in writing of any insurance cancellation notice it receives or other knowledge of pending or actual insurance policy cancellation, within a reasonable amount of time upon receipt of such notice or acquisition of such knowledge. Additionally, the CONSULTANT is required to notify OC San in writing of any change in the terms of insurance, including reduction in coverage or increase in deductible/SIR, within a reasonable amount of time upon receipt of such notice or knowledge of same.

Said notices shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Contracts, Purchasing & Materials Management Division

J. Primary Insurance:

All liability policies shall contain a Primary and Non-Contributory Clause with the exception of Workers' Compensation and Professional Liability. Any other insurance maintained by OC San shall be excess and not contributing with the insurance provided by the CONSULTANT.

K. Separation of Insured:

All liability policies shall contain a "Separation of Insureds" clause.

L. Non-Limiting (if applicable):

Nothing in this document shall be construed as limiting in any way, nor shall it limit the indemnification provision contained in this Agreement or the extent to which the CONSULTANT may be held responsible for payment of damages to persons or property.

M. Deductibles and Self-Insured Retentions:

Any deductible and/or self-insured retention must be declared to OC San on the Certificate of Insurance. All deductibles and/or self-insured retentions require acceptance by OC San. At the option of OC San, either: a) the insurer shall reduce or eliminate such deductible or self-insured retention as respects OC San or b) the CONSULTANT shall provide a financial guarantee satisfactory to OC San guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

N. Defense Costs:

Liability policies, except for Professional Liability coverage, shall have a provision that defense costs for all insureds and additional insureds are paid in addition to and do not deplete any policy limits.

O. Subconsultants/Subcontractors:

The CONSULTANT shall be responsible to establish insurance requirements for Subconsultants/Subcontractors hired by the CONSULTANT. The insurance shall be in amounts and types reasonably sufficient to deal with the risk of loss involving the Subconsultants'/Subcontractors' operations and work.

SECTION 9. PROJECT TEAM AND SUBCONSULTANTS

CONSULTANT shall provide to OC San, prior to execution of a Task Order, the names and full descriptions of all Subconsultants/Subcontractors and CONSULTANT's project team members anticipated to be used in performing work under a Task Order. In its proposal, CONSULTANT shall include a description of the work and services to be performed by each Subconsultant/Subcontractor and each of CONSULTANT's project team members. CONSULTANT shall include the respective compensation amounts for CONSULTANT and each Subconsultant/Subcontractor broken down as indicated in Section 4 – COMPENSATION, above.

There shall be no substitution of the listed Subconsultants/Subcontractors and CONSULTANT's project team members without prior written approval by OC San.

SECTION 10. ENGINEERING REGISTRATION

The CONSULTANT's personnel and its Subconsultants/Subcontractors shall be comprised of registered engineers and a staff of specialists and draftsmen in each department. The firm itself is not a registered engineer but represents and agrees that when the performance of this Agreement requires the services of a registered engineer, such services hereunder will be performed under the direct supervision of registered engineers who are registered in the State of California.

SECTION 11. AUDIT PROVISIONS

- A. OC San retains the reasonable right to access, review, examine, and audit any and all books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify that the CONSULTANT is in compliance with all the requirements under this Agreement. The CONSULTANT shall include OC San's right as described above in any and all of their subcontracts and shall ensure that these rights are binding upon all its Subconsultants/Subcontractors.
- B. OC San retains the right to examine CONSULTANT's books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify all direct and indirect costs, of whatever nature, which are claimed to have been incurred, or anticipated to be incurred, or to ensure CONSULTANT's compliance with all the requirements under this Agreement during the term of this Agreement and for a period of three (3) years after expiration or earlier termination of the Agreement.
- C. The CONSULTANT shall maintain complete and accurate records in accordance with generally accepted industry standard practices and OC San's policy. The CONSULTANT shall make available to OC San for review and audit all project-related accounting records and documents and any other financial data within fifteen (15) days after receipt of notice from OC San. Upon OC San's request, the CONSULTANT shall submit exact duplicates of originals of all requested records to OC San. If an audit is performed, the CONSULTANT shall ensure that a qualified employee of the CONSULTANT will be available to assist OC San's auditor in obtaining all project related accounting records and documents and any other financial data.

SECTION 12. LEGAL RELATIONSHIP BETWEEN PARTIES

The legal relationship between the Parties is that of an independent contractor and nothing herein shall be deemed to transform the CONSULTANT, its staff, independent contractors, or its Subconsultants/Subcontractors, into agents or employees of OC San and shall obtain no rights to any benefits which accrue to OC San's employees. CONSULTANT's staff performing services under the Agreement shall at all times be employees and/or independent contractors of the CONSULTANT. The CONSULTANT shall monitor and control its staff and wages, salaries, and other amounts due directly to its staff in connection with the Agreement. The CONSULTANT shall be responsible for hiring, review, and termination of its staff and shall be accountable for all reports and obligations respecting them, such as social security, income tax withholding, unemployment compensation, workers' compensation insurance, and similar matters.

SECTION 13. NOTICES

All notices hereunder and communications regarding the interpretation of the terms of this Agreement, or changes thereto, shall be effected by delivery of said notices in person or by depositing said notices in the U.S. mail, registered or certified mail, return receipt requested, postage prepaid.

Notice shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Ludwig Lapus, Principal Contracts Administrator
Copy: Daniel Berokoff, Engineering Supervisor

Notice shall be mailed to CONSULTANT at:

Kleinfelder, Inc.
24411 Ridge Route Drive, Suite 225
Laguna Hills, CA 92653
Attention: Jeffrey S. Walker

All communication regarding the Task Order will be addressed to the Project Manager. Direction from other OC San staff must be approved in writing by OC San's Project Manager prior to action from the CONSULTANT.

SECTION 14. TERMINATION

OC San may terminate this Agreement at any time, without cause, upon giving thirty (30) days written notice to the CONSULTANT. In the event of such termination, the CONSULTANT shall be entitled to compensation for work performed on a prorated basis through and including the effective date of termination.

The CONSULTANT shall be permitted to terminate this Agreement upon thirty (30) days written notice only if the CONSULTANT is not compensated for billed amounts in accordance with the provisions of this Agreement when the same are due. Notice of termination shall be mailed to OC San at the address listed in Section 13 – NOTICES, above.

SECTION 15. COMPLIANCE

The CONSULTANT certifies by the execution of this Agreement that it pays employees not less than the minimum wage as defined by law and that it does not discriminate in its employment with regard to race, color, religion, sex, or national origin; that it is in compliance with all Federal, State, and local directives and executive orders regarding non-discrimination in employment; and that it agrees to demonstrate positively and aggressively the principle of equal opportunity in employment.

The CONSULTANT shall comply with all applicable laws, ordinances, codes, and regulations of Federal, State, and local government in all aspects related to this Agreement and any work completed for OC San.

SECTION 16. AGREEMENT EXECUTION AUTHORIZATION

Both OC San and the CONSULTANT do covenant that each individual executing this document by and on behalf of each Party is a person duly authorized to execute this Agreement for that Party.

SECTION 17. DISPUTE RESOLUTION

In the event of a dispute arising between the Parties regarding performance or interpretation of this Agreement, the dispute shall be resolved by binding arbitration under the auspices of the Judicial Arbitration and Mediation Service ("JAMS"), or similar organization or entity conducting alternate dispute resolution services.

SECTION 18. ATTORNEY'S FEES, COSTS, AND NECESSARY DISBURSEMENTS

If any action at law or inequity or if any proceeding in the form of an Alternative Dispute Resolution is necessary to enforce or interpret the terms of this Agreement, the prevailing Party shall be entitled to reasonable attorney's fees, costs and necessary disbursements in addition to any other relief to which it may be entitled.

SECTION 19. WARRANTY

CONSULTANT shall perform its services in accordance with generally accepted industry and professional standards defined herein as that level of care and skill ordinarily exercised by other members of CONSULTANT's profession practicing in the same locality under similar conditions and at the date the Services are provided (Standard of Care). If, within the 12-month period following completion of its services, OC San informs the CONSULTANT that any part of the services fails to meet those standards, the CONSULTANT shall, within the time prescribed by OC San, take all such actions as are necessary to correct or complete the noted deficiency(ies).

SECTION 20. INDEMNIFICATION

To the fullest extent permitted by law, the CONSULTANT shall indemnify, defend (at the CONSULTANT's sole cost and expense and with legal counsel approved by OC San, which approval shall not be unreasonably withheld), protect and hold harmless OC San and all of OC San's officers, directors, employees, consultants, and agents (collectively the

“Indemnified Parties”), from and against any and all claims, damages, liabilities, causes of action, suits, arbitration awards, losses, judgments, fines, penalties, costs, and expenses (including, without limitation, attorneys’ fees, disbursements and court costs, and all other professional, expert, or CONSULTANT’s fees and costs, and OC San’s general and administrative expenses) individually, a “Claim” and collectively, “Claims”, which may arise from or are in any manner related, directly or indirectly, to any work performed or any operations, activities, or services provided by the CONSULTANT in carrying out its obligations under this Agreement to the extent of the negligent, recklessness, and/or willful misconduct of the CONSULTANT, its principals, officers, agents, employees, CONSULTANT’s suppliers, Subconsultants, Subcontractors, and/or anyone employed directly or indirectly by any of them, regardless of any contributing negligence or strict liability of an Indemnified Party. Notwithstanding the foregoing, nothing herein shall be construed to require the CONSULTANT to indemnify the Indemnified Parties from any Claim arising solely from:

- (A) the active negligence or willful misconduct of the Indemnified Parties; or
- (B) a natural disaster or other act of God, such as an earthquake; or
- (C) the independent action of a third party who is neither one of the Indemnified Parties nor the CONSULTANT, nor its principal, officer, agent, employee, nor the CONSULTANT’s supplier, Subconsultant, Subcontractor, nor anyone employed directly or indirectly by any of them.

Exceptions (A) through (B) above shall not apply, and the CONSULTANT shall, to the fullest extent permitted by law, indemnify the Indemnified Parties from Claims arising from more than one cause if any such cause taken alone would otherwise result in the obligation to indemnify hereunder.

The CONSULTANT’s liability for indemnification hereunder is in addition to any liability the CONSULTANT may have to OC San for a breach by the CONSULTANT of any of the provisions of this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit the CONSULTANT’s indemnification obligation or other liability hereunder. The terms of this Agreement are contractual and the result of negotiation between the Parties. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code section 1654) that ambiguities are to be construed against the drafting Party shall not be employed in the interpretation of this Agreement.

SECTION 21. DUTY TO DEFEND

The duty to defend hereunder is wholly independent of and separate from the duty to indemnify and such duty to defend shall exist regardless of any ultimate liability of the CONSULTANT and shall be consistent with Civil Code section 2782.8. Such defense obligation shall arise immediately upon presentation of a Claim by any person if, without regard to the merit of the Claim, such Claim could potentially result in an obligation to indemnify one or more Indemnified Parties and upon written notice of such Claim being provided to the CONSULTANT. Payment to the CONSULTANT by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition precedent to enforcing such Indemnified Party’s rights to indemnification hereunder. In the event a final judgment, arbitration, award, order, settlement, or other final resolution

expressly determines that the Claim did not arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONSULTANT, to any extent, then OC San will reimburse the CONSULTANT for the reasonable costs of defending the Indemnified Parties against such Claims.

Notwithstanding any of the foregoing, and with respect to professional liability claims only, Consultant shall not have an upfront duty to defend and shall satisfy any defense obligation at the time of judgment, award or settlement by paying a share of the defense costs incurred by the indemnified party in a proportionate amount equal to consultant's fault or liability.

The CONSULTANT's indemnification obligation hereunder shall survive the expiration or earlier termination of this Agreement until such time as action against the Indemnified Parties for such matter indemnified hereunder is fully and finally barred by the applicable statute of limitations.

SECTION 22. COMPLIANCE WITH OC SAN POLICIES AND PROCEDURES

The CONSULTANT shall be required to comply with all OC San policies and procedures. OC San requires the CONSULTANT and its Subconsultants/Subcontractors to follow and ensure their employees follow all Federal, State, and local regulations as well as OC San's safety standards while working at OC San locations. If during the course of the contract it is discovered that OC San's safety standards do not comply with Federal, State, or local regulations, then the CONSULTANT is required to follow the most stringent regulatory requirement at no additional cost to OC San. The CONSULTANT and all of its employees and Subconsultants/Subcontractors shall adhere to all applicable Contractor Safety Standards attached hereto as Attachment "L".

SECTION 23. GOVERNING LAW

This Agreement shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in Orange County in the event any action is brought in connection with this Agreement or the performance thereof.

SECTION 24. TIME OF ESSENCE

Time is of the essence in the performance of this Agreement.

SECTION 25. CONFLICT OF INTEREST

The CONSULTANT covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of the services contemplated by this Agreement. No person having such interest shall be employed by or associated with the CONSULTANT.

SECTION 26. ENTIRE AGREEMENT

This Agreement constitutes the entire understanding and agreement between the Parties and supersedes all previous negotiations between them pertaining to the subject matter hereof.

IN WITNESS WHEREOF, this Agreement has been executed in the name of OC San and the CONSULTANT by their respective duly authorized officers, as of the date first written above.

KLEINFELDER, INC.

By _____ Date _____

Printed Name & Title

ORANGE COUNTY SANITATION DISTRICT

By _____ Date _____
Chad P. Wanke
Board Chairman

By _____ Date _____
Kelly A. Lore
Clerk of the Board

By _____ Date _____
Ruth Zintzun
Finance & Procurement Manager

Attachments: Attachment "A" Sample Scope of Work
Attachment "B" Not Used
Attachment "C" Not Used
Attachment "D" Allowable Direct Costs
Attachment "E" Rates Proposal
Attachment "F" Not Used
Attachment "G" Not Used
Attachment "H" Not Used
Attachment "I" Not Used
Attachment "J" Not Used
Attachment "K" Not Used
Attachment "L" Contractor Safety Standards
Attachment "M" Iran Contracting Act Verification

ATTACHMENT “A”

SAMPLE SCOPE OF WORK

ATTACHMENT "A"

SAMPLE SCOPE OF WORK DESCRIPTION

OC SAN staff will develop detailed scope of work to be included in each Request for Task Order Proposal (RFTOP). The RFTOP will require Consultants to base their proposals on the scope of work included in the RFTOP. The remainder of this document are the templates typically used for design projects. Notes to scope editor are shown, although they will be removed before a scope of work is included in a RFTOP. Yellow highlighted text indicates where project specific information or a hypothetical example is given.

Design Task Order

Attachment A - Scope of Work

1 PROJECT REQUIREMENTS

Provide professional design engineering services for the project described herein.

1.1 BACKGROUND

- A. The Secondary Clarifiers at Plant No. 1 were constructed under Project Nos. P1-16 (1973), P1-36-2 (1995), and P1-82 (2005). A buried ductile iron plant water line around the secondary clarifiers feeds the scum sprayers and hose bibs. Because the plant water chemical composition is so corrosive to ductile iron, many failures have occurred.

1.2 GENERAL PROJECT DESCRIPTION

- A. This project includes the replacement of approximately 1800 feet of existing 6-inch ductile iron buried plant water piping, valves, fittings, and connections.
- B. A location map is provided in **Figure 1**.

[insert location map]

Figure 1 - Project Location Map

1.3 PROJECT ELEMENTS

- A. **Element 1: Piping** – Replace the existing 1,800 feet of 6-inch buried ductile iron plant water piping with new 6-inch plant water piping.
- B. Assumptions for level of effort:
1. 1,600 feet of piping shall be below grade and 200 feet shall be either above or below grade.
 - a. 1,600 feet of piping is located around the Secondary Clarifiers. Assume high-density polyethylene (HDPE) as the pipe material with appropriate dimension ratio value.
 - b. 200 feet of piping will re-route the existing plant water line on the northwest end of the Secondary Clarifiers. Recent projects disconnected the existing plant water line at various locations resulting in an incomplete loop. This piping will reconnect the lines to allow for a complete loop. See Exhibit 13.1 for photos and Exhibit 13.3 for proposed routing design.
 - (1) For above grade pipe material, assume cement-lined ductile iron or fiberglass-reinforced plastic.
 2. Follow existing alignment with new pipe. New alignments shall be kept as close to the existing alignment as feasible.
 - a. The Secondary Effluent Junction Box No. 4 (SEJB-4), located at the southwest corner of the Secondary Clarifiers, is congested with various utilities, such as plant water, secondary effluent, and reclaimed water lines, and associated valves. Follow the existing alignment in this important area.
 - b. Concrete encasement of HDPE, located on the west side of the Secondary Clarifiers on Fuentes Road, was installed under project P1-102 (2006). Assume potholing is necessary to survey the edge of the concrete and confirm the limits of the existing concrete encasement

do not interfere with this project. As much as possible, the new alignment shall avoid the concrete encasement.

1.4 PROJECT SCHEDULE

- A. **Table 1** lists major project deliverables along with Orange County Sanitation District's (OC SAN) review and approval periods. CONSULTANT shall comply with the deadlines indicated in that table. OC SAN will consider an alternative CONSULTANT proposed schedule provided it is consistent with OC SAN resources, schedule constraints, and adds value. The negotiated durations will set the design baseline schedule.

Table 1 – Project Milestones and Deadlines

MILESTONE	DEADLINE
Kickoff Meeting	The kickoff meeting will be scheduled to coincide with the Project Notice to Proceed (NTP).
Preliminary Design Memo (PDM)	[XX] workdays from Preliminary Design Phase NTP.
OC SAN Review of PDM	10 workdays from receipt of PDM.
Submit Design Submittal 3 (DS3)	[YY] workdays from approval of PDM.
OC SAN Review of DS3	15 workdays from receipt of DS3.
Submit Final Design Submittal (FDS)	15 workdays from receipt of OC SAN comments on DS3.
OC SAN Review of FDS	10 workdays from receipt of FDS.
Submit Final Technical Plans and Specifications (FTPS)	15 workdays from receipt of OC SAN comments on FDS.
Total	[ZZZ] workdays

1.5 PROJECT MANAGEMENT

- A. CONSULTANT shall be responsible for managing CONSULTANT's project execution, schedule, budget, subconsultants, and coordination with other projects.
- B. Per **Exhibit 18**, PMWeb will be used for the management of this agreement.
- C. [Monthly Progress Report: Submit monthly progress reports at the same time as monthly invoices that include the following contents:
1. Work activities completed to date, in the current reporting period, and projected for the coming month.
 2. A brief description of outstanding issues and potential cost, schedule, quality impacts.
 3. Potential changes in the project scope or design scope.
 4. Any corrective actions needed to avoid potential impacts.
 5. Budget status: actual costs to date, costs to complete, and costs at completion.
 6. Schedule status: variances between scheduled and forecasted milestone dates.]
- D. Monthly Invoices: Provide a monthly cost report and/or invoices, which shall document the man-hours and billing rate for each person that works on the project, and shall include the following:
1. Budget
 2. Current billing period invoicing
 3. Previous billing period "total invoiced to date"
 4. Budget Amount Remaining
 5. Current billing period "total percent invoiced to date"

1.6 QUALITY CONTROL

- A. Provide Quality Assurance and Quality Control of the work.
- B. Provide documentation upon request that the CONSULTANT has performed a quality control review in-house, and all the comments have been addressed prior to providing any submittals to OC SAN.

1.7 PROJECT MEETINGS

- A. CONSULTANT shall communicate throughout the project to keep OC SAN apprised of the job, review work-in-progress, share information, discuss project submittals, present findings of technical analyses, receive and resolve comments, and obtain decisions and direction by OC SAN staff.
 - 1. **Table 2** below lists the anticipated meetings and site visits. Microsoft Teams shall be used for meetings. CONSULTANT will provide an agenda 2 workdays prior to each meeting. Meeting minutes will be submitted to the OC SAN project manager for review within 3 workdays of the meeting.

Table 2 – Project Assumed Meetings and Site Visits

DESIGN ACTIVITY	MEETINGS	SITE VISITS
Kickoff Meeting	1 (1-hour)	
PDM	Progress meeting (1-hour, every 2 weeks)	8 hours
PDM Workshop	2 (1-hour)	
DS3	Progress meeting (1-hour, every 2 weeks)	8 hours
DS3 Workshop	2 (1-hour)	
FDS	Progress meeting (1-hour, weekly)	
FDS Workshop	1 (1-hour)	
FTPS	Progress meeting (1-hour, weekly)	
Construction Services	6 hours	24 hours
Closeout	4 hours	12 hours

1.8 SUBMITTAL REVIEWS

- A. Deliverables (other than specifications) shall be submitted in searchable PDF format with no hard copy. Deliverables shall be bookmarked and hyperlinked for navigation per **Exhibit 14**.
- B. OC SAN has standardized on the use of Bluebeam Revu for reviewing and providing comments to PDF files. The purpose of the studio session is to provide review and collaboration. OC SAN staff will create the Bluebeam studio session, invite attendees, configure, and manage the studio session. Make drawing submittals in Bluebeam and respond to OC SAN comments in Bluebeam per **Exhibit 15**.

1.9 SPECIFICATIONS

- A. Prior to preparing or editing specifications, CONSULTANT shall meet with OC SAN staff to determine which OC SAN and CONSULTANT provided specifications should be included in the design. After discussions, all specifications should be loaded in Microsoft Teams (Teams) early in design and prior to editing for DS3.
- B. Tailor all specifications to project and remove requirements that do not apply.
- C. Unless a CONSULTANT is using their own specification management software, Specifications should remain in Teams for editing throughout design. Make all edits to specifications hosted in Teams. Unless agreed to, Specifications should not be removed from Teams or edited elsewhere.
- D. Provide specifications as Microsoft Word (Word) files with Track Changes enabled throughout design.

- E. OC SAN staff will review specifications during submittal review periods. CONSULTANT shall respond to OC SAN comments using Word “Reply” and “Resolve.” CONSULTANT shall “Reply” to each OC SAN comment describing how the comment will be addressed and revise the specification, as needed, to address the comment. “Resolve” will be used by the reviewer or designee to confirm their comment has been addressed. For more information see **Exhibit 16**.
- F. Prior to advertisement, all Word comments and revisions shall be Track Changes accepted, rejected, resolved, or deleted by OC SAN staff prior to bid.

2 PRELIMINARY DESIGN

All significant material and equipment decisions are to be made before the start of Design. At the end Preliminary Design, major design elements shall be fixed, and major equipment, footprints, and utility connection locations shall be well established. The extent of the design and the number and type of drawings shall also be established.

2.1 PRELIMINARY DESIGN AND PDM

- A. The PDM shall consist of a PowerPoint presentation. Present PDM findings and recommendations to OC SAN in a stakeholder meeting using the PowerPoint presentation mentioned in this section for consensus before the start of Design.
- B. Identify any equipment that has one competitive supplier (i.e., sole source). In those cases, recommend an appropriate procurement strategy compatible with California Law and OC SAN policies.
- C. Develop 2 conceptual design alternatives for the plant water piping alignment.
 - 1. Alternatives:
 - a. Reuse exiting alignment and existing points of connection
 - b. Alternate alignment along tunnels in and around secondary clarifiers
 - 2. Perform the following with each alternative:
 - a. Cost, benefit, and life cycle analysis.
 - b. Identify plant water construction shutdown requirements with estimated durations.
 - c. Identify construction access requirements and limitations.
 - d. Prepare preliminary drawings (sketches).
 - 3. Discuss the available alternatives with OC SAN. The PDM shall include the recommendation alternative.
- D. Prepare drawings showing:
 - 1. Proposed alignment of piping
 - 2. Proposed piping materials and quantities
 - 3. Proposed quantity and type of valves and valve cans
 - 4. Proposed connection points which include the following:
 - a. New replacement pipes connecting to existing main plant water line
 - b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
 - 5. Demolition of existing ductile iron pipes and valves
 - 6. Proposed design of new valves and valve cans
 - 7. Proposed design of connection points
 - a. New replacement pipes connecting to existing main plant water lines

- b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
- 8. Proposed design of pipe supports by typical detail and max spacing table
- E. Summarize key constructability and construction sequencing constraints.
 - 1. Develop process flow schematic of the components of the plant water system at Plant No. 1 that impact the pipelines being replaced.
- F. Prepare preliminary construction schedule.
- G. Prepare P&IDs: Fully detailed for each design "module", e.g., 1 pump set typical of all with proposed tagging strategy.
- H. Perform any potholing activities required for the concrete encasement survey specified under Element 1.
- I. Quantify soil contamination by determining the volume of excavation work needed to perform the Work. Coordinate with OC SAN ENGINEER to determine the area of excavation. Soil testing is not necessary.
- J. Develop testing requirements. Assume:
 - 1. Pressure leak and valve testing shall be included.
 - 2. Plant water operating pressure is 110 PSI.

2.2 PRELIMINARY DESIGN CONSTRUCTION COST ESTIMATE

- A. Prepare an AACE International Class 3 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01. Data used to prepare the cost estimate shall be included as an attachment to the PDM.
 - 1. Determine project specific and appropriate values to use for the percentages for profit, bond, and insurance.
 - 2. Costs for project level allowance, insurance, profit, and bond shall be cumulative and listed as individual line items.
 - 3. Allowances or mark ups should be well explained and itemized.
 - a. Include "Market Volatility" allowance of xx%.(revise based on the market conditions)
 - b. Do not setup allowance for change orders.
 - c. Do not escalate to midpoint of construction - this is by OC SAN.
 - 4. Specialty work should be recently (under 6 months) estimated by vendor.
 - a. For example, sewer bypassing services should be estimated by vendor (i.e., Rain 4 Rent).
 - b. Provide vendor quotes for high-cost equipment.
 - c. Minor equipment costs may be documented by written telephone quotations.
 - 5. Provide breakdown of lump sum costs.
 - 6. Show labor rates so they can be checked.
 - 7. Provide all back back up for all documentation obtained for the cost estimate purposes. The cost estimate back up shall have the date and the vendor name/contact name. If catalog price is used, provide the year of that publication.
- B. Prepare estimate of construction duration. The suggested construction duration shall take in considerations the verifiable lead time for all equipment.

3 DESIGN

Prepare biddable plans, technical specifications, other Bid Documents, and any associated design calculations, required to complete the Project Elements.

3.1 DS3 DELIVERABLES

- A. Meet at a 50% completion level with OC SAN staff to review design progress. Formal deliverables are not necessary. QA/QC is also not required for this preview.
- B. At this submittal, the design is essentially finished and submitted as complete. DS3 shall include all finished and checked plans and specifications. OC SAN staff will review DS3 and provide comments to the drawings and specifications. The CONSULTANT should be finished with no remaining design work except for OC SAN comments provided at DS3 review and their incorporation at FDS.
- C. [Prepare construction drawings in CAD conforming to OC SAN's CAD Manual. A CAD compliance check will be performed at DS3 (Exhibit 17, Chapter 8 explains the CAD compliance check, and Appendix D contains the "CAD Standards Compliance Checklist" summarizing all items checked by OC SAN). OC SAN will provide base layers and utilities for Work locations within the treatment plant boundaries.]

3.2 DS3 COST ESTIMATE

- A. Prepare an AACE International Class 2 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01 based on the DS3 design. Data used to prepare the cost estimate shall be included as an attachment to DS3.
- B. Prepare estimate of construction duration.

3.3 FDS DELIVERABLES

- A. Final Design Submittal (FDS) is for OC SAN to confirm all comments from DS3 have been addressed and incorporated and add any additional comments.

3.4 FTPS DOCUMENTS

- A. Final Technical Plans and Specifications is for the CONSULTANT to address and incorporate all comments and provide all necessary stamps and signatures for a complete bid package suitable for advertisement by OC SAN.

3.5 CONSTRUCTION COST ESTIMATE "ENGINEER'S ESTIMATE"

- A. 30 calendar days prior to advertisement, refresh the DS3 Class 2 cost estimate. Get updated vendor quotes used to prepare the DS3 cost estimate. This will become the Engineer's Estimate published in the front-end documents.

3.6 PERMITTING ASSISTANCE ([ALLOCATE 60 HOURS] [NOT INCLUDED IN THIS AGREEMENT])

- A. [For all applicable Project Elements of this Scope of Work, provide Bid Documents that ensure that the design complies with all conditions of existing permits and permits required to construct and implement this project. Testing, construction drawings, specifications, and supplemental drawings shall be prepared, as necessary, in the format required to obtain all permits.]
- B. Assist OC SAN in obtaining permits. This assistance shall include identifying applicable permits, completing required design, plan preparation, application forms provided by OC SAN, preparing supporting documentation for the permit applications as required by the issuing agency, furnishing the required number of copies of all construction drawings and exhibits, and attend meetings with permitting agencies at the request of OC SAN.
- C. Except for construction contractor-furnished permits, OC SAN staff will execute all applications. CONSULTANT shall determine the cost and requirements of all permits. All permit fees will be paid directly by OC SAN and will not be part of CONSULTANT's fee.
- D. Submit all supporting documentation in a timely fashion for all permits required for this project as described below.
 - 1. Caltrans Encroachment Permits

- a. Determine if encroachment permits or other types of permits are required by Caltrans for the design and construction phases. Provide the work necessary to obtain such permits including coordinating and attending meetings.

2. City/County Encroachment Permits

- a. Provide coordination, work effort, and attend meetings, as required, to obtain encroachment permits from each city and agency who has jurisdiction. Process the plans through the cities and agencies for approval, revise plans, and meet with them, as required, to obtain approval.]

3.7 BID SUPPORT SERVICES

- A. Provide answers to bidder's questions related to the design. Provide revisions to specifications and drawings when needed for addendum.
- B. Within 2 weeks of the bid opening date, prepare conformed document set (drawings, databases, specification, and other required materials) that incorporates the addenda. See requirements of OC SAN's CAD Manual.

3.8 POPULATE PMWEB LIST OF SUBMITTALS (ALLOCATE 24 HOURS)

- A. PMWeb is used to manage communication with the contractor. OC SAN uses an Excel template to populate the list of all submittals. The CONSULTANT shall review each project specification and complete the Submittal Items Template as follows:
 1. Enter the list of project specifications.
 2. Enter the list of commissioning packages. Commissioning packages are defined by Section 01810, Commissioning.
 3. Enter the following information for each submittal item.
 - a. Specification section: enter the specification section requiring the submittal.
 - b. Submittal Item description: enter the description of the submittal. Submittal items that refer to multiple specifications shall include referenced specification sections in brackets.
 - c. Comments: enter notes, comments, or clarifications. This field is optional.
 - d. Commissioning package: enter the commissioning package of the submittal item. Submittal items shall be duplicated when the same submittal is required for multiple commissioning packages. Items shall be separated into mobilization, general construction, or a commissioning package defined by the project specifications.
 - e. Phase: Identify which phase each submittal is required to be approved.
 - f. Retention: Specify if the submittal is a Project File or Facility Record based on OC SAN's Records Retention Policy.
 - g. Lead time: Specify the appropriate number of workdays that OC SAN has to review the particular submittal.
 - h. Load: Specify if the submittal should be loaded into PMWeb prior to NTP, upon contractor approval, or prior to the start of commissioning.
- B. OC SAN will provide a PMWeb Master Submittal Items template that includes the submittals required by OC SAN's Master Specifications. The CONSULTANT shall not deviate from the Master PMWeb Submittal Items, except as required by the project specific specifications. The CONSULTANT shall develop submittal items for specifications that are not part of OC SAN's Master Specifications.
- C. OC SAN will provide a 1-hour virtual training on the use of the PMWeb Master Submittal Items Template.
- D. The CONSULTANT shall populate, receive comments, address comments, and provide completed submittal form as follows:
 1. 20 workdays after advertisement date.

3.9 SAFETY AND RISK MEETING

- A. Ensure that an OC San Risk Management safety and security professional has been assigned to the project.
- B. CONSULTANT shall prepare and meet with OC San Risk Management personnel at all design stages to review Exhibit 11 Sample Full Project Safety Review Plan and Exhibit 12 Sample Risk Management Check List. This shall be completed in accordance with Exhibit 4 Risk Management Requirements.
- C. CONSULTANT shall update Exhibits 11 and 12 throughout the design phases. CONSULTANT shall provide OC San Risk Management with the final copies of Exhibit 11 and Exhibit 12 at completion of the Design Project.

4 CONSTRUCTION SERVICES

OC SAN will administer and provide field inspection for construction contracts. Construction and installation support services shall be provided by the CONSULTANT on an as-needed basis and as requested by OC SAN. The services are indicated below.

4.1 SUBMITTAL REVIEWS (ALLOCATE 15 HOURS)

- A. OC SAN will manage submittal review. The CONSULTANT shall use PMWeb to review and return comments to OC SAN. Return comments within 5 workdays.

4.2 REQUESTS FOR INFORMATION (RFIS) (ALLOCATE 15 HOURS)

- A. OC SAN will manage the processing of RFI's. When requested by OC SAN, CONSULTANT shall return written responses to OC SAN within 5 workdays of receipt of RFI using PMWeb. Generate necessary sketches, figures, and modifications to the drawings for clarifications.

4.3 PROGRESS MEETINGS AND SITE VISITS

- A. Refer to **Table 2**.

4.4 RECORD DRAWINGS

- A. Verify that the Contractor's As-Built set correctly reflects the information included in the approved shop drawings, RFIs, approved Field Change Orders, plan clarifications, plan changes, and other deviations from the conformed drawings, and that the information in the set is complete.
- B. Draft Record Drawings shall be submitted to OC SAN within 4 weeks of receipt from OC SAN of the approved Contractor's As-Built drawings. The Final Record Drawings shall be submitted within one week of receipt of OC SAN comments on the Draft Record Drawings.
- C. Prepare Draft Record Drawings based on the Final Field Markup Set for all drawings in accordance with the requirements in the CAD Manual. Submit the Draft Record Drawings to the OC SAN Resident Engineer. The Draft Record Drawings will be reviewed for content and CAD compliance by OC SAN staff. If no comments are identified, CONSULTANT shall prepare the Final Record Drawings and submit them along with the Contractor's field markup set to the Project Manager. For content and placement of record drawing stamp, see CAD Manual.
- D. Submit an electronic copy of the record drawings to OC SAN for review and approval. The acceptance of the record drawings shall be deemed a condition for completion of work.
- E. Contractor-generated drawings described in the Design Guidelines and the shop drawings will not be updated by CONSULTANT. The format and quantities for delivery of the submittals shall be listed below:

Contents	Draft Record Drawings	Final Record Drawings
All related electronic files, including CAD and compiled PDFs.	One copy to be uploaded to Microsoft Teams.	One copy to be uploaded to Microsoft Teams.

4.5 EQUIPMENT INFORMATION DATABASE (EID) (ALLOCATE [X] HOURS [NOT INCLUDED IN THIS AGREEMENT])

- A. OC SAN uses Maximo software to manage and track asset information. When new assets are added or existing assets are modified by a project, an EID Excel spreadsheet is used to populate or update Maximo asset information. CONSULTANT shall meet with OC SAN EIM staff to request an EID spreadsheet pre-populated with the new or modified assets. OC SAN staff will provide training on how to populate the EID spreadsheet. Field work will be needed to apply equipment tags and record equipment nameplate information and serial numbers to populate the EID. Coordinate with Maintenance Specialists (David Haug or designee, Div. 870) to walk new facilities to verify accuracy of P&IDs and EID.

4.6 [UPDATE BASELINE DRAWINGS]

5 STAFF ASSISTANCE

OC SAN staff member or designee assigned to work with CONSULTANT on the design of this project is Jessica Cheung. Phone (714) 593-7147, e-mail jcheung@ocsan.gov.

6 EXHIBITS

- A. Exhibits 1-3, 5-10 – Not Used
- B. Exhibit 4 – Risk Management Requirements
- C. Exhibit 11 – Sample Full Project Safety Review Plan
- D. Exhibit 12 – Sample Risk Management Checklist
- E. Exhibit 13 – Project Reference Material
 - a. 13.1 – Photos
 - b. 13.2 – Plant 1 Plant Water System Map
 - c. 13.3 – Proposed Design Idea (The CONSULTANT may start with this conceptual design.)
 - d. 13.4 – Proposed Valve Cans (The CONSULTANT may start with this conceptual design.)
 - e. 13.5 – Record Drawings (Available Upon Request)
 - (1) P1-82, Activated Sludge Plant Rehabilitation (2005)
 - (2) P1-36-2, Secondary Treatment Improvements at Plant No. 1 (1995)
 - (3) P1-16, 46 MGD Activated Sludge Plant at Reclamation Plant No. 1 (1973)
 - (4) P1-102, Secondary Activated Sludge Facility 2 at Plant No.1 (2006)
- F. Exhibit 14 – BlueBeam Designer Training for Submission
- G. Exhibit 15 – BlueBeam Designer User Training
- H. Exhibit 16 – Spec Review using Microsoft Word and Teams
- I. Exhibit 17 – [CAD Standard Manual](#)
- J. Exhibit 18 – PMWeb

JC:tk

PROFESSIONAL DESIGN SERVICES AGREEMENT

This PROFESSIONAL DESIGN SERVICES AGREEMENT (Agreement), to be effective this 1st day of July, 2024, is made and entered into by and between:

ORANGE COUNTY SANITATION DISTRICT
hereinafter referred to as "OC San"

AND

LEE & RO, INC.
hereinafter referred to as "CONSULTANT"

individually referred to as the "Party" and collectively as the "Parties".

RECITALS

WHEREAS, in accordance with Ordinance No. OC SAN-61 and pursuant to a Request for Qualifications ("Underlying RFQ"), the Board of Directors of OC San, by action on May 22, 2024, approved the award of the Agreement for **CONTRACT NO. FE24-00-11**, to CONSULTANT to provide services for selected projects on a task order (Task Order) basis from July 1, 2024 to June 30, 2027; and

WHEREAS, consistent with the Underlying RFQ, the CONSULTANT has been prequalified to perform services for the following project types: Project Type 2: Linear and Collections and Project Type 3: Process, Electrical and Instrumentation & Control (I&C); and

WHEREAS, for Task Orders estimated to cost \$100,000 or less, the Director of Engineering, with concurrence of the Purchasing Manager, may solicit a proposal from one (1) firm on the prequalified list, which will include the project types for which the consultants are prequalified; and

WHEREAS, the CONSULTANT is qualified to provide and has agreed to provide the necessary professional engineering and related services under this Agreement; and

WHEREAS, by this Agreement, the Parties intend to set forth the general terms and conditions that will apply to any specific project for which CONSULTANT is given a Task Order by OC San.

NOW, THEREFORE, OC San and the CONSULTANT mutually agree as follows:

SECTION 1. SCOPE OF AGREEMENT

OC San, at its sole discretion, may, from time to time during the term of this Agreement, issue a Request for Task Order Proposal ("RFTOP") setting forth the detailed requirements and scope of work to be performed on the identified project and thereafter, upon receipt of a proposal from the CONSULTANT, may issue a Task Order to proceed with the work. The scope of work will be in a form attached hereto as Attachment "A" – Sample Scope of Work.

Upon execution by OC San, the Task Order shall become an operative part of this Agreement. Should any conflict or inconsistency exist in the contract documents identified in this section, the conflict or inconsistency shall be resolved by applying the provisions in the highest priority document, which shall be determined in the following order of priority:

1. Agreement and any amendments thereto
2. the Task Order
3. the RFTOP

SECTION 2. TASK ORDER ISSUANCE BY OC SAN

The Task Order issued by OC San shall, specifically or by reference to the RFTOP and corresponding proposal, set forth the terms that will apply to the specific project for which the services will be rendered. Those terms shall include, but not be limited to, scope of work, time for performance, and compensation.

SECTION 3. TERM

This Agreement shall commence on the effective date of this Agreement and terminate on June 30, 2027, unless further extended by written agreement signed by the Parties. Any work that is required by a Task Order and is not finished by the date of termination shall be continued and completed by the CONSULTANT and the terms and conditions of this Agreement shall continue in effect for that time. OC San may, at its option, renew this Agreement for two (2) additional terms of one (1) year each, for a maximum contract duration of five (5) years.

SECTION 4. COMPENSATION

The total compensation payable to the CONSULTANT pursuant to this Agreement shall not exceed One Million Dollars (\$1,000,000) per year in accordance with the terms described in SECTION 3 - TERM. The compensation includes, but is not limited to, fees for professional engineering services based on the CONSULTANT's burdened labor rates, overhead, and profit, and fees from the CONSULTANT's subconsultants/subcontractors (Subconsultants/Subcontractors). The specific amount of compensation payable to the CONSULTANT for services rendered on an individual project, pursuant to a Task Order, shall be established for each Task Order and shall not exceed Five Hundred Thousand Dollars (\$500,000) per individual Task Order unless authorized by OC San's Board of Directors. The CONSULTANT agrees and acknowledges that the execution of this Agreement does not in any way guarantee that a Task Order will be issued to the CONSULTANT. Moreover, execution of this Agreement shall not entitle the CONSULTANT to any form of payment or compensation from OC San without OC San first having issued a written Task Order.

A. Total Compensation

Total compensation for any Task Order shall not exceed the amount indicated in the approved Task Order and any approved amendments thereto.

B. Labor

As a portion of the total compensation to be paid to CONSULTANT, OC San shall pay to CONSULTANT a sum equal to the burdened salaries (salaries plus benefits) actually paid by CONSULTANT charged on an hourly-rate basis to the project and paid to

CONSULTANT's personnel. For each Task Order, the cost of benefits for CONSULTANT shall be based on the fringe rates identified in Attachment "E" – Rates Proposal. Upon request of OC San, CONSULTANT shall provide OC San with certified payroll records of all employees' work that is charged to the project.

C. Overhead

As a portion of the total compensation to be paid to CONSULTANT, for each Task Order, OC San shall compensate CONSULTANT for overhead at the rates equal to the percentage of burdened labor as specified in Attachment "E" – Rates Proposal.

D. Profit

For each Task Order, profit shall be ten percent (10%) of burdened labor and overhead for all CONSULTANT fees and its Major Subconsultants (Architecture & Engineering [A&E] consulting services) whose fees for services are greater than or equal to \$100,000. Profit shall remain fixed through the term of this Agreement, inclusive of any renewals identified in Section 3 – TERM.

As a portion of the total compensation to be paid to CONSULTANT and its Major Subconsultants, OC San shall pay profit for all services rendered by CONSULTANT and its Major Subconsultants for the Task Order as specified in the previous paragraph.

E. Subconsultants

For each Task Order, any Minor Subconsultant (A&E consulting services) whose fees for services are less than \$100,000 and any Subconsultant/Subcontractor (non-A&E consulting services), CONSULTANT shall pay to Subconsultant/Subcontractor total compensation based on an established hourly rate schedule by personnel classification. The hourly rates shall cover burdened salary costs, overhead and profit. The compensation for each Minor Subconsultants and Subconsultants/Subcontractors (non-A&E consulting services), including both labor related fees, and direct costs shall not exceed the amount, as negotiated prior to award of a Task Order.

For each Task Order, any Major Subconsultant (A&E consulting services) whose fees for services are greater than or equal to \$100,000, total compensation for labor will be based on burdened labor rates, overhead, and profit, as negotiated prior to award of Task Order. Prior to award of Task Order, the CONSULTANT shall provide to OC San, if available, an audit performed for another public agency which documents the Major Subconsultant's labor burden rate and overhead rate. This audit shall be the most current available and have been conducted for a period that ended within twelve months of the task order proposal due date. This information shall be provided by CONSULTANT within ten (10) business days from request by OC San.

F. Direct Costs

OC San shall reimburse CONSULTANT and its Subconsultants/Subcontractors the actual costs of permits and associated fees, travel, licenses, and other services in an amount not to exceed the sums set forth in each approved Task Order. OC San shall also pay to CONSULTANT actual costs for equipment rentals, leases or purchases with prior written approval of OC San. Upon request, CONSULTANT shall provide to OC San receipts and

other documentary records to support CONSULTANT's request for reimbursement of these amounts, refer to Attachment "D" – Allowable Direct Costs. All incidental expenses shall be included in the overhead cost pursuant to this SECTION 4 – COMPENSATION.

G. Other Direct Costs

OC San will reimburse the CONSULTANT for Other Direct Costs incurred by CONSULTANT and its Subconsultants/Subcontractors due to modifications in the scope of work resulting from field investigations and field work required by the Task Order. These items may include special equipment, test equipment and tooling, and other materials and services not previously identified. Refer to Attachment "D" – Allowable Direct Costs for payment information.

H. Reimbursable Direct Costs

OC San will reimburse the CONSULTANT for reasonable travel and business expenses as described in this section and further described in Attachment "D" – Allowable Direct Costs. The reimbursement of the above-mentioned expenses will be based on an "accountable plan" as considered by the Internal Revenue Service (IRS). The plan includes a combination of reimbursements based upon receipts and a "per diem" component approved by the IRS. The most recent schedule of the per diem rates utilized by OC San may be found on the U.S. General Services Administration website at <https://www.gsa.gov/travel/plan-book/per-diem-rates>.

The CONSULTANT shall be responsible for the most economical and practical means of management of reimbursable costs inclusive, but not limited to, travel, lodging, and meals arrangements. OC San shall apply the most economic and practical method of reimbursement which may include reimbursements based upon receipts and/or "per diem" as deemed the most practical.

CONSULTANT shall be responsible for returning to OC San any excess reimbursements after the reimbursement has been paid by OC San.

Travel and travel arrangements – Any travel involving airfare, overnight stays, or multiple day attendance must be approved by OC San in advance.

Local travel is considered travel by the CONSULTANT within OC San general geographical area which includes Orange, Los Angeles, Ventura, San Bernardino, Riverside, San Diego, Imperial, and Kern Counties. Automobile mileage is reimbursable if CONSULTANT is required to utilize a personal vehicle for local travel.

Lodging – Overnight stays will not be approved by OC San for local travel. However, under certain circumstances overnight stay may be allowed at the discretion of OC San based on reasonableness of meeting schedules and the amount of time required for travel by the CONSULTANT. Such determination will be made on a case-by-case basis and at the discretion of OC San.

Travel Meals – Per diem rates as approved by the IRS shall be utilized for travel meals reimbursements. Per diem rates shall be applied to meals that are appropriate for travel times. Receipts are not required for the approved meals.

Additional details related to the reimbursement of the allowable direct costs are provided in Attachment "D" – Allowable Direct Costs.

I. Limitation of Costs

If, at any time, CONSULTANT estimates the cost of performing the services described in CONSULTANT's proposal will exceed seventy-five percent (75%) of the not to exceed amount of the Task Order, including any approved additional compensation, CONSULTANT shall notify OC San immediately, in writing. The written notice shall indicate the additional amount necessary to complete the services. Any cost incurred in excess of the approved not to exceed amount, without the express written consent of OC San's authorized representative, shall be at CONSULTANT's own risk. This written notice shall be provided separately from, and in addition to, any notification requirements contained in the CONSULTANT's invoice and monthly progress report. Failure to notify OC San that the services cannot be completed within the authorized not to exceed amount of a Task Order is a material breach of this Agreement.

J. Method of Payment:

The CONSULTANT shall submit for approval by OC San, monthly invoices based on the total services which have been satisfactorily completed and specifying a percentage of completion. The CONSULTANT's billings shall be certified for payment by OC San only after OC San has determined that the CONSULTANT has completed each applicable project task.

CONSULTANT shall submit separate invoices for each Task Order on a monthly basis.

CONSULTANT understands that submitted costs are subject to Section 11 - AUDIT PROVISIONS, below.

K. Task Order Completion

Upon satisfactory completion by CONSULTANT of the work called for under the terms of the Task Order and upon acceptance of such work by OC San, CONSULTANT will be paid the unpaid balance of any money due for such work.

Upon satisfactory completion of the work performed under each Task Order and prior to final payment under each Task Order for such work or prior settlement upon termination of this Agreement, and as a condition precedent thereto, CONSULTANT shall execute and deliver to OC San a release of all claims against OC San arising under or by virtue of this Agreement other than such claims, if any, as may be specifically exempted by CONSULTANT from the operation of the release in stated amounts to be set forth therein.

L. False Claims

Pursuant to the California False Claims Act (Government Code Sections 12650-12655), any CONSULTANT that knowingly submits a false claim to OC San for compensation under the terms of this Agreement may be held liable for treble damages and up to a Ten Thousand Dollars (\$10,000) civil penalty for each false claim submitted. This section shall also be binding on all Subconsultants/Subcontractors.

The CONSULTANT or its Subconsultants/Subcontractors shall be deemed to have submitted a false claim when the CONSULTANT or its Subconsultants/Subcontractors: (a) knowingly presents or causes to be presented to an officer or employee of OC San a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by OC San; (c) conspires to defraud OC San by getting a false claim allowed or paid by OC San; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to OC San; or (e) is a beneficiary of an inadvertent submission of a false claim to OC San and fails to disclose the false claim to OC San within a reasonable time after discovery of the false claim.

M. California Department of Industrial Relations (DIR) Registration and Record of Wages:

To the extent the CONSULTANT's employees and/or its Subconsultants/Subcontractors who will perform work during the design, preconstruction, and construction phases of a construction contract for which Prevailing Wage Determinations have been issued by the DIR and as more specifically defined under Labor Code Section 1720 et seq., CONSULTANT and its Subconsultants/Subcontractors shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4, the work is subject to compliance monitoring and enforcement by the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776 and shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Penalties for non-compliance with the requirements of Labor Code section 1776 may be deducted from progress payments per Labor Code section 1776.

Pursuant to Labor Code section 1776, the CONSULTANT and its Subconsultants/Subcontractors shall furnish a copy of all certified payroll records to OC San and/or general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 16461(e).

N. Record of Expenses:

The CONSULTANT shall keep complete and accurate records of all costs and expenses incidental to services covered by this Agreement. Such records will be made available to OC San upon request.

O. Reallocation of Total Compensation:

OC San, by its Director of Engineering, shall have the right to approve a reallocation of the incremental amounts constituting the total compensation payable under the Task Order, provided that the total compensation for the Task Order is not increased.

SECTION 5. LIMITATIONS UPON SUBCONTRACTING AND ASSIGNMENT

The CONSULTANT shall not contract with any other person or entity to perform the services required without the written approval of OC San. This Agreement may not be assigned voluntarily or by operation of law without the prior written approval of OC San. If the CONSULTANT is permitted to subcontract any part of this Agreement by OC San, the CONSULTANT shall be responsible to OC San for the acts and omissions of its Subconsultant/Subcontractor, as it is for persons directly employed by the CONSULTANT. Nothing contained in this Agreement shall create any contractual relationship between any Subconsultant/Subcontractor and OC San. All persons engaged in the work will be considered employees of the CONSULTANT. OC San will deal directly with and will make all payments to the CONSULTANT.

SECTION 6. CHANGES TO SCOPE OF WORK

In the event of a change in the scope of work as requested by OC San or any other changes to the Task Order, the Parties shall execute an amendment to the Task Order setting forth with particularity all new terms of the Task Order, including, but not limited to, any additional compensation.

SECTION 7. DOCUMENT OWNERSHIP – CONSULTANT PERFORMANCE

- A. All documents in all forms (electronic, paper, etc.), including, but not limited to, studies, sketches, drawings, computer printouts, disk files, and electronic copies prepared in connection with or related to the scope of work shall be the property of OC San. OC San's ownership of these documents includes use of, reproduction or reuse of, and all incidental rights, whether or not the work for which they were prepared has been performed. OC San's ownership entitlement arises upon payment or any partial payment for work performed and includes ownership of any and all work product completed prior to that payment. This section shall apply whether the CONSULTANT's services are satisfied by the completion of the Agreement or are terminated in accordance with other provisions of this Agreement. Notwithstanding any other provision of this section or Agreement, the CONSULTANT shall have the right to make copies of all such plans, studies, sketches, drawings, computer printouts and disk files, and specifications.
- B. CONSULTANT shall not be responsible for damage caused by subsequent changes to or uses of the deliverables where the subsequent changes or uses are not authorized or approved by CONSULTANT, provided that the service rendered by CONSULTANT was not a proximate cause of the damage.
- C. Copies of Work Product

Upon completion of the work required for each Task Order, the CONSULTANT shall deliver to OC San the number of copies specified in the specific Task Order scope of work of the final report containing the CONSULTANT's findings, conclusions, recommendations, and all supporting documentation and/or final design drawings and specifications. Each Task Order will define the requirements for the deliverables.

SECTION 8. INSURANCE

A. General:

- i. Insurance shall be issued and underwritten by insurance companies acceptable to OC San.
- ii. Insurers must have an "A-" Policyholder's Rating, or better, and Financial Rating of at least Class VIII, or better, in accordance with the most current A.M. Best's Guide Rating. However, OC San will accept State Compensation Insurance Fund for the required policy of Worker's Compensation Insurance subject to OC San's option to require a change in insurer in the event the State Fund financial rating is decreased below "B". Further, OC San will require CONSULTANT to substitute any insurer whose rating drops below the levels herein specified. Said substitution shall occur within twenty (20) days of written notice to CONSULTANT by OC San or its agent.
- iii. Coverage shall be in effect prior to the commencement of any work under this Agreement.

B. General Liability:

The CONSULTANT shall maintain during the life of this Agreement, including the period of warranty, Commercial General Liability Insurance written on an occurrence basis providing the following minimum limits of liability coverage: Two Million Dollars (\$2,000,000) per occurrence with Four Million Dollars (\$4,000,000) aggregate. If aggregate limits apply separately to this Agreement (as evidenced by submission of ISO form CG 25 03 or CG 25 04), then the aggregate limit may be equivalent to the per occurrence limit. Said insurance shall include coverage for the following hazards: Premises-Operations, blanket contractual liability (for this Agreement), products liability/completed operations (including any product manufactured or assembled), broad form property damage, blanket contractual liability, independent contractors liability, personal and advertising injury, mobile equipment, owners and contractors protective liability, and cross liability and severability of interest clauses. A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement(s). If requested by OC San and applicable, XCU coverage (Explosion, Collapse and Underground) and Riggers/On Hook Liability must be included in the General Liability policy and coverage must be reflected on the submitted Certificate of Insurance.

C. Umbrella Excess Liability:

The minimum limits of general liability and automobile liability insurance required, as set forth herein, shall be provided for through either a single policy of primary insurance or a combination of policies of primary and umbrella excess coverage. Umbrella excess liability coverage shall be issued with limits of liability which, when combined with the primary insurance, will equal the minimum limits for general liability and automobile liability.

D. Automobile/Vehicle Liability Insurance:

The CONSULTANT shall maintain a policy of automobile liability insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and other vehicles providing the following minimum limit of liability coverage: combined single limit of One Million Dollars (\$1,000,000). A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement.

E. Drone Liability Insurance:

If a drone will be used, drone liability insurance must be maintained by the CONSULTANT in the amount of One Million Dollars (\$1,000,000) in a form acceptable to OC San.

F. Worker's Compensation Insurance:

The CONSULTANT shall provide such Workers' Compensation Insurance as required by the Labor Code of the State of California in the amount of the statutory limit, including Employer's Liability Insurance with a minimum limit of One Million Dollars (\$1,000,000) per occurrence. Such Worker's Compensation Insurance shall be endorsed to provide for a waiver of subrogation in favor of OC San. A statement on an insurance certificate will not be accepted in lieu of the actual endorsements unless the insurance carrier is the State of California Insurance Fund and the identifier "SCIF" and applicable endorsements are referenced on the certificate of insurance. If an exposure to Jones Act liability may exist, the insurance required herein shall include coverage for Jones Act claims.

G. Errors and Omissions/Professional Liability:

The CONSULTANT shall maintain in full force and effect, throughout the term of this Agreement, standard industry form professional liability/errors and omissions insurance coverage with coverage limits of not less than Two Million Dollars (\$2,000,000) in accordance with the provisions of this paragraph. If the policy of insurance is written on a "claims made" basis, said policy shall be continued in full force and effect at all times during the term of this Agreement and for a period of five (5) years from the date of the completion of the services hereunder.

In the event of termination of said policy during this period, the CONSULTANT shall obtain continuing insurance coverage for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement. Said coverage shall be evidenced by either a new policy evidencing no gap in coverage or by separate extended "tail" coverage with the present or new carrier.

In the event the present policy of insurance is written on an "occurrence" basis, said policy shall be continued in full force and effect during the term of this Agreement or until completion of the services provided for in this Agreement, whichever is later. In the event of termination of said policy during this period, new coverage shall be obtained for the required period to insure for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement.

The CONSULTANT shall provide to OC San a certificate of insurance in a form acceptable to OC San indicating the deductible or self-retention amounts and the expiration date of said policy and shall provide renewal certificates not less than ten (10) days prior to the expiration of each policy term.

H. Proof of Coverage:

The CONSULTANT shall furnish OC San with original certificates and amendatory endorsements effecting coverage. Said policies and endorsements shall conform to the requirements herein stated. All certificates and endorsements must be received and accepted by OC San before work commences. OC San reserves the right to require, at any time, complete, certified copies of all required insurance policies, including endorsements, effecting the coverage required. The following are approved forms that must be submitted as proof of coverage:

- | | |
|--|--|
| • Certificate of Insurance | ACORD Form 25 or other equivalent Certificate of Insurance form |
| • Additional Insurance (General Liability) | The combination of (ISO Forms) CG 2010 <u>and</u> CG 2037 |
| | All other additional insured endorsements must be submitted for approval by OC San and OC San may reject alternatives that provide different or less coverage to OC San. |
| • Additional Insured (Auto Liability) | Submit Endorsement provided by carrier for OC San's approval. |
| • Waiver of Subrogation | Submit workers' compensation waiver of subrogation endorsement provided by carrier for OC San's approval. |
| • Cancellation Notice | No endorsement is required. However, Vendor/Contractor is responsible for notifying OC San of any pending or actual insurance policy cancellation, as described in Article I. Cancellation and Policy Change Notice below. |

I. Cancellation and Policy Change Notice:

The CONSULTANT is required to notify OC San in writing of any insurance cancellation notice it receives or other knowledge of pending or actual insurance policy cancellation, within two (2) working days of receipt of such notice or acquisition of such knowledge. Additionally, the CONSULTANT is required to notify OC San in writing of any change in the terms of insurance, including reduction in coverage or increase in deductible/SIR, within two (2) working days of receipt of such notice or knowledge of same.

Said notices shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Contracts, Purchasing & Materials Management Division

J. Primary Insurance:

All liability policies shall contain a Primary and Non-Contributory Clause. Any other insurance maintained by OC San shall be excess and not contributing with the insurance provided by the CONSULTANT.

K. Separation of Insured:

All liability policies shall contain a "Separation of Insureds" clause.

L. Non-Limiting (if applicable):

Nothing in this document shall be construed as limiting in any way, nor shall it limit the indemnification provision contained in this Agreement or the extent to which the CONSULTANT may be held responsible for payment of damages to persons or property.

M. Deductibles and Self-Insured Retentions:

Any deductible and/or self-insured retention must be declared to OC San on the Certificate of Insurance. All deductibles and/or self-insured retentions require acceptance by OC San. At the option of OC San, either: a) the insurer shall reduce or eliminate such deductible or self-insured retention as respects OC San or b) the CONSULTANT shall provide a financial guarantee satisfactory to OC San guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

N. Defense Costs:

Liability policies shall have a provision that defense costs for all insureds and additional insureds are paid in addition to and do not deplete any policy limits.

O. Subconsultants/Subcontractors:

The CONSULTANT shall be responsible to establish insurance requirements for Subconsultants/Subcontractors hired by the CONSULTANT. The insurance shall be in amounts and types reasonably sufficient to deal with the risk of loss involving the Subconsultants'/Subcontractors' operations and work.

P. Limits Are Minimums:

If the CONSULTANT maintains higher limits than any minimums shown above, then OC San requires and shall be entitled to coverage for the higher limits maintained by the CONSULTANT.

SECTION 9. PROJECT TEAM AND SUBCONSULTANTS

CONSULTANT shall provide to OC San, prior to execution of a Task Order, the names and full descriptions of all Subconsultants/Subcontractors and CONSULTANT's project team members anticipated to be used in performing work under a Task Order. In its proposal, CONSULTANT shall include a description of the work and services to be performed by each Subconsultant/Subcontractor and each of CONSULTANT's project team members. CONSULTANT shall include the respective compensation amounts for CONSULTANT and each Subconsultant/Subcontractor broken down as indicated in Section 4 – COMPENSATION, above.

There shall be no substitution of the listed Subconsultants/Subcontractors and CONSULTANT's project team members without prior written approval by OC San.

SECTION 10. ENGINEERING REGISTRATION

The CONSULTANT's personnel and its Subconsultants/Subcontractors shall be comprised of registered engineers and a staff of specialists and draftsmen in each department. The firm itself is not a registered engineer but represents and agrees that when the performance of this Agreement requires the services of a registered engineer, such services hereunder will be performed under the direct supervision of registered engineers who are registered in the State of California.

SECTION 11. AUDIT PROVISIONS

- A. OC San retains the reasonable right to access, review, examine, and audit any and all books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify that the CONSULTANT is in compliance with all the requirements under this Agreement. The CONSULTANT shall include OC San's right as described above in any and all of their subcontracts and shall ensure that these rights are binding upon all its Subconsultants/Subcontractors.
- B. OC San retains the right to examine CONSULTANT's books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify all direct and indirect costs, of whatever nature, which are claimed to have been incurred, or anticipated to be incurred, or to ensure CONSULTANT's compliance with all the requirements under this Agreement during the term of this Agreement and for a period of three (3) years after expiration or earlier termination of the Agreement.
- C. The CONSULTANT shall maintain complete and accurate records in accordance with generally accepted industry standard practices and OC San's policy. The CONSULTANT shall make available to OC San for review and audit all project-related accounting records and documents and any other financial data within fifteen (15) days after receipt of notice from OC San. Upon OC San's request, the CONSULTANT shall submit exact duplicates of originals of all requested records to OC San. If an audit is performed, the CONSULTANT shall ensure that a qualified employee of the CONSULTANT will be available to assist OC San's auditor in obtaining all project related accounting records and documents and any other financial data.

SECTION 12. LEGAL RELATIONSHIP BETWEEN PARTIES

The legal relationship between the Parties is that of an independent contractor and nothing herein shall be deemed to transform the CONSULTANT, its staff, independent contractors, or its Subconsultants/Subcontractors, into agents or employees of OC San and shall obtain no rights to any benefits which accrue to OC San's employees. CONSULTANT's staff performing services under the Agreement shall at all times be employees and/or independent contractors of the CONSULTANT. The CONSULTANT shall monitor and control its staff and wages, salaries, and other amounts due directly to its staff in connection with the Agreement. The CONSULTANT shall be responsible for hiring, review, and termination of its staff and shall be accountable for all reports and obligations respecting them, such as social security, income tax withholding, unemployment compensation, workers' compensation insurance, and similar matters.

SECTION 13. NOTICES

All notices hereunder and communications regarding the interpretation of the terms of this Agreement, or changes thereto, shall be effected by delivery of said notices in person or by depositing said notices in the U.S. mail, registered or certified mail, return receipt requested, postage prepaid.

Notice shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue, Fountain Valley, CA 92708
Attention: Ludwig Lapus, Principal Contracts Administrator
Copy: Daniel Berokoff, Engineering Supervisor

Notice shall be mailed to CONSULTANT at:

Lee & Ro, Inc.
1199 South Fullerton Road
City of Industry, CA 91748
Attention: Amritendu Maji

All communication regarding the Task Order will be addressed to the Project Manager. Direction from other OC San staff must be approved in writing by OC San's Project Manager prior to action from the CONSULTANT.

SECTION 14. TERMINATION

OC San may terminate this Agreement at any time, without cause, upon giving thirty (30) days written notice to the CONSULTANT. In the event of such termination, the CONSULTANT shall be entitled to compensation for work performed on a prorated basis through and including the effective date of termination.

The CONSULTANT shall be permitted to terminate this Agreement upon thirty (30) days written notice only if the CONSULTANT is not compensated for billed amounts in accordance with the provisions of this Agreement when the same are due. Notice of termination shall be mailed to OC San at the address listed in Section 13 – NOTICES, above.

SECTION 15. COMPLIANCE

The CONSULTANT certifies by the execution of this Agreement that it pays employees not less than the minimum wage as defined by law and that it does not discriminate in its employment with regard to race, color, religion, sex, or national origin; that it is in compliance with all Federal, State, and local directives and executive orders regarding non-discrimination in employment; and that it agrees to demonstrate positively and aggressively the principle of equal opportunity in employment.

The CONSULTANT shall comply with all applicable laws, ordinances, codes, and regulations of Federal, State, and local government in all aspects related to this Agreement and any work completed for OC San.

SECTION 16. AGREEMENT EXECUTION AUTHORIZATION

Both OC San and the CONSULTANT do covenant that each individual executing this document by and on behalf of each Party is a person duly authorized to execute this Agreement for that Party.

SECTION 17. DISPUTE RESOLUTION

In the event of a dispute arising between the Parties regarding performance or interpretation of this Agreement, the dispute shall be resolved by binding arbitration under the auspices of the Judicial Arbitration and Mediation Service ("JAMS"), or similar organization or entity conducting alternate dispute resolution services.

SECTION 18. ATTORNEY'S FEES, COSTS, AND NECESSARY DISBURSEMENTS

If any action at law or inequity or if any proceeding in the form of an Alternative Dispute Resolution is necessary to enforce or interpret the terms of this Agreement, the prevailing Party shall be entitled to reasonable attorney's fees, costs and necessary disbursements in addition to any other relief to which it may be entitled.

SECTION 19. WARRANTY

CONSULTANT shall perform its services in accordance with generally accepted industry and professional standards. If, within the 12-month period following completion of its services, OC San informs the CONSULTANT that any part of the services fails to meet those standards, the CONSULTANT shall, within the time prescribed by OC San, take all such actions as are necessary to correct or complete the noted deficiency(ies).

SECTION 20. INDEMNIFICATION

To the fullest extent permitted by law, the CONSULTANT shall indemnify, defend (at the CONSULTANT's sole cost and expense and with legal counsel approved by OC San, which approval shall not be unreasonably withheld), protect and hold harmless OC San and all of OC San's officers, directors, employees, consultants, and agents (collectively the "Indemnified Parties"), from and against any and all claims, damages, liabilities, causes of action, suits, arbitration awards, losses, judgments, fines, penalties, costs, and expenses (including, without limitation, attorneys' fees, disbursements and court costs, and all other professional, expert, or CONSULTANT's fees and costs, and OC San's general and

administrative expenses) individually, a "Claim" and collectively, "Claims", which may arise from or are in any manner related, directly or indirectly, to any work performed or any operations, activities, or services provided by the CONSULTANT in carrying out its obligations under this Agreement to the extent of the negligent, recklessness, and/or willful misconduct of the CONSULTANT, its principals, officers, agents, employees, CONSULTANT's suppliers, Subconsultants, Subcontractors, and/or anyone employed directly or indirectly by any of them, regardless of any contributing negligence or strict liability of an Indemnified Party. Notwithstanding the foregoing, nothing herein shall be construed to require the CONSULTANT to indemnify the Indemnified Parties from any Claim arising solely from:

- (A) the active negligence or willful misconduct of the Indemnified Parties; or
- (B) a natural disaster or other act of God, such as an earthquake; or
- (C) the independent action of a third party who is neither one of the Indemnified Parties nor the CONSULTANT, nor its principal, officer, agent, employee, nor the CONSULTANT's supplier, Subconsultant, Subcontractor, nor anyone employed directly or indirectly by any of them.

Exceptions (A) through (B) above shall not apply, and the CONSULTANT shall, to the fullest extent permitted by law, indemnify the Indemnified Parties from Claims arising from more than one cause if any such cause taken alone would otherwise result in the obligation to indemnify hereunder.

The CONSULTANT's liability for indemnification hereunder is in addition to any liability the CONSULTANT may have to OC San for a breach by the CONSULTANT of any of the provisions of this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit the CONSULTANT's indemnification obligation or other liability hereunder. The terms of this Agreement are contractual and the result of negotiation between the Parties. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code section 1654) that ambiguities are to be construed against the drafting Party shall not be employed in the interpretation of this Agreement.

SECTION 21. DUTY TO DEFEND

The duty to defend hereunder is wholly independent of and separate from the duty to indemnify and such duty to defend shall exist regardless of any ultimate liability of the CONSULTANT and shall be consistent with Civil Code section 2782.8. Such defense obligation shall arise immediately upon presentation of a Claim by any person if, without regard to the merit of the Claim, such Claim could potentially result in an obligation to indemnify one or more Indemnified Parties and upon written notice of such Claim being provided to the CONSULTANT. Payment to the CONSULTANT by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition precedent to enforcing such Indemnified Party's rights to indemnification hereunder. In the event a final judgment, arbitration, award, order, settlement, or other final resolution expressly determines that the Claim did not arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONSULTANT, to any extent, then OC San will reimburse the CONSULTANT for the reasonable costs of defending the Indemnified Parties against such Claims.

The CONSULTANT's indemnification obligation hereunder shall survive the expiration or earlier termination of this Agreement until such time as action against the Indemnified Parties for such matter indemnified hereunder is fully and finally barred by the applicable statute of limitations.

SECTION 22. COMPLIANCE WITH OC SAN POLICIES AND PROCEDURES

The CONSULTANT shall be required to comply with all OC San policies and procedures. OC San requires the CONSULTANT and its Subconsultants/Subcontractors to follow and ensure their employees follow all Federal, State, and local regulations as well as OC San's safety standards while working at OC San locations. If during the course of the contract it is discovered that OC San's safety standards do not comply with Federal, State, or local regulations, then the CONSULTANT is required to follow the most stringent regulatory requirement at no additional cost to OC San. The CONSULTANT and all of its employees and Subconsultants/Subcontractors shall adhere to all applicable Contractor Safety Standards attached hereto as Attachment "L".

SECTION 23. GOVERNING LAW

This Agreement shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in Orange County in the event any action is brought in connection with this Agreement or the performance thereof.

SECTION 24. TIME OF ESSENCE

Time is of the essence in the performance of this Agreement.

SECTION 25. CONFLICT OF INTEREST

The CONSULTANT covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of the services contemplated by this Agreement. No person having such interest shall be employed by or associated with the CONSULTANT.

SECTION 26. ENTIRE AGREEMENT

This Agreement constitutes the entire understanding and agreement between the Parties and supersedes all previous negotiations between them pertaining to the subject matter hereof.

[THIS SECTION INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, this Agreement has been executed in the name of OC San and the CONSULTANT by their respective duly authorized officers, as of the date first written above.

LEE & RO, INC.

By _____ Date _____

Printed Name & Title

ORANGE COUNTY SANITATION DISTRICT

By _____ Date _____
Chad P. Wanke
Board Chairman

By _____ Date _____
Kelly A. Lore
Clerk of the Board

By _____ Date _____
Ruth Zintzun
Finance & Procurement Manager

Attachments: Attachment "A" Sample Scope of Work
Attachment "B" Not Used
Attachment "C" Not Used
Attachment "D" Allowable Direct Costs
Attachment "E" Rates Proposal
Attachment "F" Not Used
Attachment "G" Not Used
Attachment "H" Not Used
Attachment "I" Not Used
Attachment "J" Not Used
Attachment "K" Not Used
Attachment "L" Contractor Safety Standards
Attachment "M" Iran Contracting Act Verification

ATTACHMENT “A”

SAMPLE SCOPE OF WORK

ATTACHMENT "A"

SAMPLE SCOPE OF WORK DESCRIPTION

OC SAN staff will develop detailed scope of work to be included in each Request for Task Order Proposal (RFTOP). The RFTOP will require Consultants to base their proposals on the scope of work included in the RFTOP. The remainder of this document are the templates typically used for design projects. Notes to scope editor are shown, although they will be removed before a scope of work is included in a RFTOP. Yellow highlighted text indicates where project specific information or a hypothetical example is given.

Design Task Order

Attachment A - Scope of Work

1 PROJECT REQUIREMENTS

Provide professional design engineering services for the project described herein.

1.1 BACKGROUND

- A. The Secondary Clarifiers at Plant No. 1 were constructed under Project Nos. P1-16 (1973), P1-36-2 (1995), and P1-82 (2005). A buried ductile iron plant water line around the secondary clarifiers feeds the scum sprayers and hose bibs. Because the plant water chemical composition is so corrosive to ductile iron, many failures have occurred.

1.2 GENERAL PROJECT DESCRIPTION

- A. This project includes the replacement of approximately 1800 feet of existing 6-inch ductile iron buried plant water piping, valves, fittings, and connections.
- B. A location map is provided in **Figure 1**.

[insert location map]

Figure 1 - Project Location Map

1.3 PROJECT ELEMENTS

- A. **Element 1: Piping** – Replace the existing 1,800 feet of 6-inch buried ductile iron plant water piping with new 6-inch plant water piping.
- B. Assumptions for level of effort:
 - 1. 1,600 feet of piping shall be below grade and 200 feet shall be either above or below grade.
 - a. 1,600 feet of piping is located around the Secondary Clarifiers. Assume high-density polyethylene (HDPE) as the pipe material with appropriate dimension ratio value.
 - b. 200 feet of piping will re-route the existing plant water line on the northwest end of the Secondary Clarifiers. Recent projects disconnected the existing plant water line at various locations resulting in an incomplete loop. This piping will reconnect the lines to allow for a complete loop. See Exhibit 13.1 for photos and Exhibit 13.3 for proposed routing design.
 - (1) For above grade pipe material, assume cement-lined ductile iron or fiberglass-reinforced plastic.
 - 2. Follow existing alignment with new pipe. New alignments shall be kept as close to the existing alignment as feasible.
 - a. The Secondary Effluent Junction Box No. 4 (SEJB-4), located at the southwest corner of the Secondary Clarifiers, is congested with various utilities, such as plant water, secondary effluent, and reclaimed water lines, and associated valves. Follow the existing alignment in this important area.
 - b. Concrete encasement of HDPE, located on the west side of the Secondary Clarifiers on Fuentes Road, was installed under project P1-102 (2006). Assume potholing is necessary to survey the edge of the concrete and confirm the limits of the existing concrete encasement

do not interfere with this project. As much as possible, the new alignment shall avoid the concrete encasement.

1.4 PROJECT SCHEDULE

- A. **Table 1** lists major project deliverables along with Orange County Sanitation District's (OC SAN) review and approval periods. CONSULTANT shall comply with the deadlines indicated in that table. OC SAN will consider an alternative CONSULTANT proposed schedule provided it is consistent with OC SAN resources, schedule constraints, and adds value. The negotiated durations will set the design baseline schedule.

Table 1 – Project Milestones and Deadlines

MILESTONE	DEADLINE
Kickoff Meeting	The kickoff meeting will be scheduled to coincide with the Project Notice to Proceed (NTP).
Preliminary Design Memo (PDM)	[XX] workdays from Preliminary Design Phase NTP.
OC SAN Review of PDM	10 workdays from receipt of PDM.
Submit Design Submittal 3 (DS3)	[YY] workdays from approval of PDM.
OC SAN Review of DS3	15 workdays from receipt of DS3.
Submit Final Design Submittal (FDS)	15 workdays from receipt of OC SAN comments on DS3.
OC SAN Review of FDS	10 workdays from receipt of FDS.
Submit Final Technical Plans and Specifications (FTPS)	15 workdays from receipt of OC SAN comments on FDS.
Total	[ZZZ] workdays

1.5 PROJECT MANAGEMENT

- A. CONSULTANT shall be responsible for managing CONSULTANT's project execution, schedule, budget, subconsultants, and coordination with other projects.
- B. Per **Exhibit 18**, PMWeb will be used for the management of this agreement.
- C. [Monthly Progress Report: Submit monthly progress reports at the same time as monthly invoices that include the following contents:
1. Work activities completed to date, in the current reporting period, and projected for the coming month.
 2. A brief description of outstanding issues and potential cost, schedule, quality impacts.
 3. Potential changes in the project scope or design scope.
 4. Any corrective actions needed to avoid potential impacts.
 5. Budget status: actual costs to date, costs to complete, and costs at completion.
 6. Schedule status: variances between scheduled and forecasted milestone dates.]
- D. Monthly Invoices: Provide a monthly cost report and/or invoices, which shall document the man-hours and billing rate for each person that works on the project, and shall include the following:
1. Budget
 2. Current billing period invoicing
 3. Previous billing period "total invoiced to date"
 4. Budget Amount Remaining
 5. Current billing period "total percent invoiced to date"

1.6 QUALITY CONTROL

- A. Provide Quality Assurance and Quality Control of the work.
- B. Provide documentation upon request that the CONSULTANT has performed a quality control review in-house, and all the comments have been addressed prior to providing any submittals to OC SAN.

1.7 PROJECT MEETINGS

- A. CONSULTANT shall communicate throughout the project to keep OC SAN apprised of the job, review work-in-progress, share information, discuss project submittals, present findings of technical analyses, receive and resolve comments, and obtain decisions and direction by OC SAN staff.
 - 1. **Table 2** below lists the anticipated meetings and site visits. Microsoft Teams shall be used for meetings. CONSULTANT will provide an agenda 2 workdays prior to each meeting. Meeting minutes will be submitted to the OC SAN project manager for review within 3 workdays of the meeting.

Table 2 – Project Assumed Meetings and Site Visits

DESIGN ACTIVITY	MEETINGS	SITE VISITS
Kickoff Meeting	1 (1-hour)	
PDM	Progress meeting (1-hour, every 2 weeks)	8 hours
PDM Workshop	2 (1-hour)	
DS3	Progress meeting (1-hour, every 2 weeks)	8 hours
DS3 Workshop	2 (1-hour)	
FDS	Progress meeting (1-hour, weekly)	
FDS Workshop	1 (1-hour)	
FTPS	Progress meeting (1-hour, weekly)	
Construction Services	6 hours	24 hours
Closeout	4 hours	12 hours

1.8 SUBMITTAL REVIEWS

- A. Deliverables (other than specifications) shall be submitted in searchable PDF format with no hard copy. Deliverables shall be bookmarked and hyperlinked for navigation per **Exhibit 14**.
- B. OC SAN has standardized on the use of Bluebeam Revu for reviewing and providing comments to PDF files. The purpose of the studio session is to provide review and collaboration. OC SAN staff will create the Bluebeam studio session, invite attendees, configure, and manage the studio session. Make drawing submittals in Bluebeam and respond to OC SAN comments in Bluebeam per **Exhibit 15**.

1.9 SPECIFICATIONS

- A. Prior to preparing or editing specifications, CONSULTANT shall meet with OC SAN staff to determine which OC SAN and CONSULTANT provided specifications should be included in the design. After discussions, all specifications should be loaded in Microsoft Teams (Teams) early in design and prior to editing for DS3.
- B. Tailor all specifications to project and remove requirements that do not apply.
- C. Unless a CONSULTANT is using their own specification management software, Specifications should remain in Teams for editing throughout design. Make all edits to specifications hosted in Teams. Unless agreed to, Specifications should not be removed from Teams or edited elsewhere.
- D. Provide specifications as Microsoft Word (Word) files with Track Changes enabled throughout design.

- E. OC SAN staff will review specifications during submittal review periods. CONSULTANT shall respond to OC SAN comments using Word “Reply” and “Resolve.” CONSULTANT shall “Reply” to each OC SAN comment describing how the comment will be addressed and revise the specification, as needed, to address the comment. “Resolve” will be used by the reviewer or designee to confirm their comment has been addressed. For more information see **Exhibit 16**.
- F. Prior to advertisement, all Word comments and revisions shall be Track Changes accepted, rejected, resolved, or deleted by OC SAN staff prior to bid.

2 PRELIMINARY DESIGN

All significant material and equipment decisions are to be made before the start of Design. At the end Preliminary Design, major design elements shall be fixed, and major equipment, footprints, and utility connection locations shall be well established. The extent of the design and the number and type of drawings shall also be established.

2.1 PRELIMINARY DESIGN AND PDM

- A. The PDM shall consist of a PowerPoint presentation. Present PDM findings and recommendations to OC SAN in a stakeholder meeting using the PowerPoint presentation mentioned in this section for consensus before the start of Design.
- B. Identify any equipment that has one competitive supplier (i.e., sole source). In those cases, recommend an appropriate procurement strategy compatible with California Law and OC SAN policies.
- C. Develop 2 conceptual design alternatives for the plant water piping alignment.
 - 1. Alternatives:
 - a. Reuse exiting alignment and existing points of connection
 - b. Alternate alignment along tunnels in and around secondary clarifiers
 - 2. Perform the following with each alternative:
 - a. Cost, benefit, and life cycle analysis.
 - b. Identify plant water construction shutdown requirements with estimated durations.
 - c. Identify construction access requirements and limitations.
 - d. Prepare preliminary drawings (sketches).
 - 3. Discuss the available alternatives with OC SAN. The PDM shall include the recommendation alternative.
- D. Prepare drawings showing:
 - 1. Proposed alignment of piping
 - 2. Proposed piping materials and quantities
 - 3. Proposed quantity and type of valves and valve cans
 - 4. Proposed connection points which include the following:
 - a. New replacement pipes connecting to existing main plant water line
 - b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
 - 5. Demolition of existing ductile iron pipes and valves
 - 6. Proposed design of new valves and valve cans
 - 7. Proposed design of connection points
 - a. New replacement pipes connecting to existing main plant water lines

- b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
- 8. Proposed design of pipe supports by typical detail and max spacing table
- E. Summarize key constructability and construction sequencing constraints.
 - 1. Develop process flow schematic of the components of the plant water system at Plant No. 1 that impact the pipelines being replaced.
- F. Prepare preliminary construction schedule.
- G. Prepare P&IDs: Fully detailed for each design "module", e.g., 1 pump set typical of all with proposed tagging strategy.
- H. Perform any potholing activities required for the concrete encasement survey specified under Element 1.
- I. Quantify soil contamination by determining the volume of excavation work needed to perform the Work. Coordinate with OC SAN ENGINEER to determine the area of excavation. Soil testing is not necessary.
- J. Develop testing requirements. Assume:
 - 1. Pressure leak and valve testing shall be included.
 - 2. Plant water operating pressure is 110 PSI.

2.2 PRELIMINARY DESIGN CONSTRUCTION COST ESTIMATE

- A. Prepare an AACE International Class 3 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01. Data used to prepare the cost estimate shall be included as an attachment to the PDM.
 - 1. Determine project specific and appropriate values to use for the percentages for profit, bond, and insurance.
 - 2. Costs for project level allowance, insurance, profit, and bond shall be cumulative and listed as individual line items.
 - 3. Allowances or mark ups should be well explained and itemized.
 - a. Include "Market Volatility" allowance of xx%.(revise based on the market conditions)
 - b. Do not setup allowance for change orders.
 - c. Do not escalate to midpoint of construction - this is by OC SAN.
 - 4. Specialty work should be recently (under 6 months) estimated by vendor.
 - a. For example, sewer bypassing services should be estimated by vendor (i.e., Rain 4 Rent).
 - b. Provide vendor quotes for high-cost equipment.
 - c. Minor equipment costs may be documented by written telephone quotations.
 - 5. Provide breakdown of lump sum costs.
 - 6. Show labor rates so they can be checked.
 - 7. Provide all back back up for all documentation obtained for the cost estimate purposes. The cost estimate back up shall have the date and the vendor name/contact name. If catalog price is used, provide the year of that publication.
- B. Prepare estimate of construction duration. The suggested construction duration shall take in considerations the verifiable lead time for all equipment.

3 DESIGN

Prepare biddable plans, technical specifications, other Bid Documents, and any associated design calculations, required to complete the Project Elements.

3.1 DS3 DELIVERABLES

- A. Meet at a 50% completion level with OC SAN staff to review design progress. Formal deliverables are not necessary. QA/QC is also not required for this preview.
- B. At this submittal, the design is essentially finished and submitted as complete. DS3 shall include all finished and checked plans and specifications. OC SAN staff will review DS3 and provide comments to the drawings and specifications. The CONSULTANT should be finished with no remaining design work except for OC SAN comments provided at DS3 review and their incorporation at FDS.
- C. [Prepare construction drawings in CAD conforming to OC SAN's CAD Manual. A CAD compliance check will be performed at DS3 (Exhibit 17, Chapter 8 explains the CAD compliance check, and Appendix D contains the "CAD Standards Compliance Checklist" summarizing all items checked by OC SAN). OC SAN will provide base layers and utilities for Work locations within the treatment plant boundaries.]

3.2 DS3 COST ESTIMATE

- A. Prepare an AACE International Class 2 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01 based on the DS3 design. Data used to prepare the cost estimate shall be included as an attachment to DS3.
- B. Prepare estimate of construction duration.

3.3 FDS DELIVERABLES

- A. Final Design Submittal (FDS) is for OC SAN to confirm all comments from DS3 have been addressed and incorporated and add any additional comments.

3.4 FTSP DOCUMENTS

- A. Final Technical Plans and Specifications is for the CONSULTANT to address and incorporate all comments and provide all necessary stamps and signatures for a complete bid package suitable for advertisement by OC SAN.

3.5 CONSTRUCTION COST ESTIMATE "ENGINEER'S ESTIMATE"

- A. 30 calendar days prior to advertisement, refresh the DS3 Class 2 cost estimate. Get updated vendor quotes used to prepare the DS3 cost estimate. This will become the Engineer's Estimate published in the front-end documents.

3.6 PERMITTING ASSISTANCE ([ALLOCATE 60 HOURS] [NOT INCLUDED IN THIS AGREEMENT])

- A. [For all applicable Project Elements of this Scope of Work, provide Bid Documents that ensure that the design complies with all conditions of existing permits and permits required to construct and implement this project. Testing, construction drawings, specifications, and supplemental drawings shall be prepared, as necessary, in the format required to obtain all permits.]
- B. Assist OC SAN in obtaining permits. This assistance shall include identifying applicable permits, completing required design, plan preparation, application forms provided by OC SAN, preparing supporting documentation for the permit applications as required by the issuing agency, furnishing the required number of copies of all construction drawings and exhibits, and attend meetings with permitting agencies at the request of OC SAN.
- C. Except for construction contractor-furnished permits, OC SAN staff will execute all applications. CONSULTANT shall determine the cost and requirements of all permits. All permit fees will be paid directly by OC SAN and will not be part of CONSULTANT's fee.
- D. Submit all supporting documentation in a timely fashion for all permits required for this project as described below.
 - 1. Caltrans Encroachment Permits

- a. Determine if encroachment permits or other types of permits are required by Caltrans for the design and construction phases. Provide the work necessary to obtain such permits including coordinating and attending meetings.

2. City/County Encroachment Permits

- a. Provide coordination, work effort, and attend meetings, as required, to obtain encroachment permits from each city and agency who has jurisdiction. Process the plans through the cities and agencies for approval, revise plans, and meet with them, as required, to obtain approval.]

3.7 BID SUPPORT SERVICES

- A. Provide answers to bidder's questions related to the design. Provide revisions to specifications and drawings when needed for addendum.
- B. Within 2 weeks of the bid opening date, prepare conformed document set (drawings, databases, specification, and other required materials) that incorporates the addenda. See requirements of OC SAN's CAD Manual.

3.8 POPULATE PMWEB LIST OF SUBMITTALS (ALLOCATE 24 HOURS)

- A. PMWeb is used to manage communication with the contractor. OC SAN uses an Excel template to populate the list of all submittals. The CONSULTANT shall review each project specification and complete the Submittal Items Template as follows:
 1. Enter the list of project specifications.
 2. Enter the list of commissioning packages. Commissioning packages are defined by Section 01810, Commissioning.
 3. Enter the following information for each submittal item.
 - a. Specification section: enter the specification section requiring the submittal.
 - b. Submittal Item description: enter the description of the submittal. Submittal items that refer to multiple specifications shall include referenced specification sections in brackets.
 - c. Comments: enter notes, comments, or clarifications. This field is optional.
 - d. Commissioning package: enter the commissioning package of the submittal item. Submittal items shall be duplicated when the same submittal is required for multiple commissioning packages. Items shall be separated into mobilization, general construction, or a commissioning package defined by the project specifications.
 - e. Phase: Identify which phase each submittal is required to be approved.
 - f. Retention: Specify if the submittal is a Project File or Facility Record based on OC SAN's Records Retention Policy.
 - g. Lead time: Specify the appropriate number of workdays that OC SAN has to review the particular submittal.
 - h. Load: Specify if the submittal should be loaded into PMWeb prior to NTP, upon contractor approval, or prior to the start of commissioning.
- B. OC SAN will provide a PMWeb Master Submittal Items template that includes the submittals required by OC SAN's Master Specifications. The CONSULTANT shall not deviate from the Master PMWeb Submittal Items, except as required by the project specific specifications. The CONSULTANT shall develop submittal items for specifications that are not part of OC SAN's Master Specifications.
- C. OC SAN will provide a 1-hour virtual training on the use of the PMWeb Master Submittal Items Template.
- D. The CONSULTANT shall populate, receive comments, address comments, and provide completed submittal form as follows:
 1. 20 workdays after advertisement date.

3.9 SAFETY AND RISK MEETING

- A. Ensure that an OC San Risk Management safety and security professional has been assigned to the project.
- B. CONSULTANT shall prepare and meet with OC San Risk Management personnel at all design stages to review Exhibit 11 Sample Full Project Safety Review Plan and Exhibit 12 Sample Risk Management Check List. This shall be completed in accordance with Exhibit 4 Risk Management Requirements.
- C. CONSULTANT shall update Exhibits 11 and 12 throughout the design phases. CONSULTANT shall provide OC San Risk Management with the final copies of Exhibit 11 and Exhibit 12 at completion of the Design Project.

4 CONSTRUCTION SERVICES

OC SAN will administer and provide field inspection for construction contracts. Construction and installation support services shall be provided by the CONSULTANT on an as-needed basis and as requested by OC SAN. The services are indicated below.

4.1 SUBMITTAL REVIEWS (ALLOCATE 15 HOURS)

- A. OC SAN will manage submittal review. The CONSULTANT shall use PMWeb to review and return comments to OC SAN. Return comments within 5 workdays.

4.2 REQUESTS FOR INFORMATION (RFIS) (ALLOCATE 15 HOURS)

- A. OC SAN will manage the processing of RFI's. When requested by OC SAN, CONSULTANT shall return written responses to OC SAN within 5 workdays of receipt of RFI using PMWeb. Generate necessary sketches, figures, and modifications to the drawings for clarifications.

4.3 PROGRESS MEETINGS AND SITE VISITS

- A. Refer to **Table 2**.

4.4 RECORD DRAWINGS

- A. Verify that the Contractor's As-Built set correctly reflects the information included in the approved shop drawings, RFIs, approved Field Change Orders, plan clarifications, plan changes, and other deviations from the conformed drawings, and that the information in the set is complete.
- B. Draft Record Drawings shall be submitted to OC SAN within 4 weeks of receipt from OC SAN of the approved Contractor's As-Built drawings. The Final Record Drawings shall be submitted within one week of receipt of OC SAN comments on the Draft Record Drawings.
- C. Prepare Draft Record Drawings based on the Final Field Markup Set for all drawings in accordance with the requirements in the CAD Manual. Submit the Draft Record Drawings to the OC SAN Resident Engineer. The Draft Record Drawings will be reviewed for content and CAD compliance by OC SAN staff. If no comments are identified, CONSULTANT shall prepare the Final Record Drawings and submit them along with the Contractor's field markup set to the Project Manager. For content and placement of record drawing stamp, see CAD Manual.
- D. Submit an electronic copy of the record drawings to OC SAN for review and approval. The acceptance of the record drawings shall be deemed a condition for completion of work.
- E. Contractor-generated drawings described in the Design Guidelines and the shop drawings will not be updated by CONSULTANT. The format and quantities for delivery of the submittals shall be listed below:

Contents	Draft Record Drawings	Final Record Drawings
All related electronic files, including CAD and compiled PDFs.	One copy to be uploaded to Microsoft Teams.	One copy to be uploaded to Microsoft Teams.

4.5 EQUIPMENT INFORMATION DATABASE (EID) (ALLOCATE [X] HOURS [NOT INCLUDED IN THIS AGREEMENT])

- A. OC SAN uses Maximo software to manage and track asset information. When new assets are added or existing assets are modified by a project, an EID Excel spreadsheet is used to populate or update Maximo asset information. CONSULTANT shall meet with OC SAN EIM staff to request an EID spreadsheet pre-populated with the new or modified assets. OC SAN staff will provide training on how to populate the EID spreadsheet. Field work will be needed to apply equipment tags and record equipment nameplate information and serial numbers to populate the EID. Coordinate with Maintenance Specialists (David Haug or designee, Div. 870) to walk new facilities to verify accuracy of P&IDs and EID.

4.6 [UPDATE BASELINE DRAWINGS]

5 STAFF ASSISTANCE

OC SAN staff member or designee assigned to work with CONSULTANT on the design of this project is Jessica Cheung. Phone (714) 593-7147, e-mail jcheung@ocsan.gov.

6 EXHIBITS

- A. Exhibits 1-3, 5-10 – Not Used
- B. Exhibit 4 – Risk Management Requirements
- C. Exhibit 11 – Sample Full Project Safety Review Plan
- D. Exhibit 12 – Sample Risk Management Checklist
- E. Exhibit 13 – Project Reference Material
 - a. 13.1 – Photos
 - b. 13.2 – Plant 1 Plant Water System Map
 - c. 13.3 – Proposed Design Idea (The CONSULTANT may start with this conceptual design.)
 - d. 13.4 – Proposed Valve Cans (The CONSULTANT may start with this conceptual design.)
 - e. 13.5 – Record Drawings (Available Upon Request)
 - (1) P1-82, Activated Sludge Plant Rehabilitation (2005)
 - (2) P1-36-2, Secondary Treatment Improvements at Plant No. 1 (1995)
 - (3) P1-16, 46 MGD Activated Sludge Plant at Reclamation Plant No. 1 (1973)
 - (4) P1-102, Secondary Activated Sludge Facility 2 at Plant No.1 (2006)
- F. Exhibit 14 – BlueBeam Designer Training for Submission
- G. Exhibit 15 – BlueBeam Designer User Training
- H. Exhibit 16 – Spec Review using Microsoft Word and Teams
- I. Exhibit 17 – [CAD Standard Manual](#)
- J. Exhibit 18 – PMWeb

JC:tk

PROFESSIONAL DESIGN SERVICES AGREEMENT

This PROFESSIONAL DESIGN SERVICES AGREEMENT (Agreement), to be effective this 1st day of July, 2024, is made and entered into by and between:

ORANGE COUNTY SANITATION DISTRICT
hereinafter referred to as "OC San"

AND

MICHAEL BAKER INTERNATIONAL, INC.
hereinafter referred to as "CONSULTANT"

individually referred to as the "Party" and collectively as the "Parties".

RECITALS

WHEREAS, in accordance with Ordinance No. OC SAN-61 and pursuant to a Request for Qualifications ("Underlying RFQ"), the Board of Directors of OC San, by action on May 22, 2024, approved the award of the Agreement for **CONTRACT NO. FE24-00-12**, to CONSULTANT to provide services for selected projects on a task order (Task Order) basis from July 1, 2024 to June 30, 2027; and

WHEREAS, consistent with the Underlying RFQ, the CONSULTANT has been prequalified to perform services for the following project types: Project Type 2: Linear and Collections and Project Type 3: Process, Electrical and Instrumentation & Control (I&C); and

WHEREAS, for Task Orders estimated to cost \$100,000 or less, the Director of Engineering, with concurrence of the Purchasing Manager, may solicit a proposal from one (1) firm on the prequalified list, which will include the project types for which the consultants are prequalified; and

WHEREAS, the CONSULTANT is qualified to provide and has agreed to provide the necessary professional engineering and related services under this Agreement; and

WHEREAS, by this Agreement, the Parties intend to set forth the general terms and conditions that will apply to any specific project for which CONSULTANT is given a Task Order by OC San.

NOW, THEREFORE, OC San and the CONSULTANT mutually agree as follows:

SECTION 1. SCOPE OF AGREEMENT

OC San, at its sole discretion, may, from time to time during the term of this Agreement, issue a Request for Task Order Proposal ("RFTOP") setting forth the detailed requirements and scope of work to be performed on the identified project and thereafter, upon receipt of a proposal from the CONSULTANT, may issue a Task Order to proceed with the work. The scope of work will be in a form attached hereto as Attachment "A" – Sample Scope of Work.

Upon execution by OC San, the Task Order shall become an operative part of this Agreement. Should any conflict or inconsistency exist in the contract documents identified in this section, the conflict or inconsistency shall be resolved by applying the provisions in the highest priority document, which shall be determined in the following order of priority:

1. Agreement and any amendments thereto
2. the Task Order
3. the RFTOP

SECTION 2. TASK ORDER ISSUANCE BY OC SAN

The Task Order issued by OC San shall, specifically or by reference to the RFTOP and corresponding proposal, set forth the terms that will apply to the specific project for which the services will be rendered. Those terms shall include, but not be limited to, scope of work, time for performance, and compensation.

SECTION 3. TERM

This Agreement shall commence on the effective date of this Agreement and terminate on June 30, 2027, unless further extended by written agreement signed by the Parties. Any work that is required by a Task Order and is not finished by the date of termination shall be continued and completed by the CONSULTANT and the terms and conditions of this Agreement shall continue in effect for that time. OC San may, at its option, renew this Agreement for two (2) additional terms of one (1) year each, for a maximum contract duration of five (5) years.

SECTION 4. COMPENSATION

The total compensation payable to the CONSULTANT pursuant to this Agreement shall not exceed One Million Dollars (\$1,000,000) per year in accordance with the terms described in SECTION 3 - TERM. The compensation includes, but is not limited to, fees for professional engineering services based on the CONSULTANT's burdened labor rates, overhead, and profit, and fees from the CONSULTANT's subconsultants/subcontractors (Subconsultants/Subcontractors). The specific amount of compensation payable to the CONSULTANT for services rendered on an individual project, pursuant to a Task Order, shall be established for each Task Order and shall not exceed Five Hundred Thousand Dollars (\$500,000) per individual Task Order unless authorized by OC San's Board of Directors. The CONSULTANT agrees and acknowledges that the execution of this Agreement does not in any way guarantee that a Task Order will be issued to the CONSULTANT. Moreover, execution of this Agreement shall not entitle the CONSULTANT to any form of payment or compensation from OC San without OC San first having issued a written Task Order.

A. Total Compensation

Total compensation for any Task Order shall not exceed the amount indicated in the approved Task Order and any approved amendments thereto.

B. Labor

As a portion of the total compensation to be paid to CONSULTANT, OC San shall pay to CONSULTANT a sum equal to the burdened salaries (salaries plus benefits) actually paid

by CONSULTANT charged on an hourly-rate basis to the project and paid to CONSULTANT's personnel. For each Task Order, the cost of benefits for CONSULTANT shall be based on the fringe rates identified in Attachment "E" – Rates Proposal. Upon request of OC San, CONSULTANT shall provide OC San with certified payroll records of all employees' work that is charged to the project.

C. Overhead

As a portion of the total compensation to be paid to CONSULTANT, for each Task Order, OC San shall compensate CONSULTANT for overhead at the rates equal to the percentage of burdened labor as specified in Attachment "E" – Rates Proposal.

D. Profit

For each Task Order, profit shall be ten percent (10%) of burdened labor and overhead for all CONSULTANT fees and its Major Subconsultants (Architecture & Engineering [A&E] consulting services) whose fees for services are greater than or equal to \$100,000. Profit shall remain fixed through the term of this Agreement, inclusive of any renewals identified in Section 3 – TERM.

As a portion of the total compensation to be paid to CONSULTANT and its Major Subconsultants, OC San shall pay profit for all services rendered by CONSULTANT and its Major Subconsultants for the Task Order as specified in the previous paragraph.

E. Subconsultants

For each Task Order, any Minor Subconsultant (A&E consulting services) whose fees for services are less than \$100,000 and any Subconsultant/Subcontractor (non-A&E consulting services), CONSULTANT shall pay to Subconsultant/Subcontractor total compensation based on an established hourly rate schedule by personnel classification. The hourly rates shall cover burdened salary costs, overhead and profit. The compensation for each Minor Subconsultants and Subconsultants/Subcontractors (non-A&E consulting services), including both labor related fees, and direct costs shall not exceed the amount, as negotiated prior to award of a Task Order.

For each Task Order, any Major Subconsultant (A&E consulting services) whose fees for services are greater than or equal to \$100,000, total compensation for labor will be based on burdened labor rates, overhead, and profit, as negotiated prior to award of Task Order. Prior to award of Task Order, the CONSULTANT shall provide to OC San, if available, an audit performed for another public agency which documents the Major Subconsultant's labor burden rate and overhead rate. This audit shall be the most current available and have been conducted for a period that ended within twelve months of the task order proposal due date. This information shall be provided by CONSULTANT within ten (10) business days from request by OC San.

F. Direct Costs

OC San shall reimburse CONSULTANT and its Subconsultants/Subcontractors the actual costs of permits and associated fees, travel, licenses, and other services in an amount not to exceed the sums set forth in each approved Task Order. OC San shall also pay to CONSULTANT actual costs for equipment rentals, leases or purchases with prior written

approval of OC San. Upon request, CONSULTANT shall provide to OC San receipts and other documentary records to support CONSULTANT's request for reimbursement of these amounts, refer to Attachment "D" – Allowable Direct Costs. All incidental expenses shall be included in the overhead cost pursuant to this SECTION 4 – COMPENSATION.

G. Other Direct Costs

OC San will reimburse the CONSULTANT for Other Direct Costs incurred by CONSULTANT and its Subconsultants/Subcontractors due to modifications in the scope of work resulting from field investigations and field work required by the Task Order. These items may include special equipment, test equipment and tooling, and other materials and services not previously identified. Refer to Attachment "D" – Allowable Direct Costs for payment information.

H. Reimbursable Direct Costs

OC San will reimburse the CONSULTANT for reasonable travel and business expenses as described in this section and further described in Attachment "D" – Allowable Direct Costs. The reimbursement of the above-mentioned expenses will be based on an "accountable plan" as considered by the Internal Revenue Service (IRS). The plan includes a combination of reimbursements based upon receipts and a "per diem" component approved by the IRS. The most recent schedule of the per diem rates utilized by OC San may be found on the U.S. General Services Administration website at <https://www.gsa.gov/travel/plan-book/per-diem-rates>.

The CONSULTANT shall be responsible for the most economical and practical means of management of reimbursable costs inclusive, but not limited to, travel, lodging, and meals arrangements. OC San shall apply the most economic and practical method of reimbursement which may include reimbursements based upon receipts and/or "per diem" as deemed the most practical.

CONSULTANT shall be responsible for returning to OC San any excess reimbursements after the reimbursement has been paid by OC San.

Travel and travel arrangements – Any travel involving airfare, overnight stays, or multiple day attendance must be approved by OC San in advance.

Local travel is considered travel by the CONSULTANT within OC San general geographical area which includes Orange, Los Angeles, Ventura, San Bernardino, Riverside, San Diego, Imperial, and Kern Counties. Automobile mileage is reimbursable if CONSULTANT is required to utilize a personal vehicle for local travel.

Lodging – Overnight stays will not be approved by OC San for local travel. However, under certain circumstances overnight stay may be allowed at the discretion of OC San based on reasonableness of meeting schedules and the amount of time required for travel by the CONSULTANT. Such determination will be made on a case-by-case basis and at the discretion of OC San.

Travel Meals – Per diem rates as approved by the IRS shall be utilized for travel meals reimbursements. Per diem rates shall be applied to meals that are appropriate for travel times. Receipts are not required for the approved meals.

Additional details related to the reimbursement of the allowable direct costs are provided in Attachment "D" – Allowable Direct Costs.

I. Limitation of Costs

If, at any time, CONSULTANT estimates the cost of performing the services described in CONSULTANT's proposal will exceed seventy-five percent (75%) of the not to exceed amount of the Task Order, including any approved additional compensation, CONSULTANT shall notify OC San immediately, in writing. The written notice shall indicate the additional amount necessary to complete the services. Any cost incurred in excess of the approved not to exceed amount, without the express written consent of OC San's authorized representative, shall be at CONSULTANT's own risk. This written notice shall be provided separately from, and in addition to, any notification requirements contained in the CONSULTANT's invoice and monthly progress report. Failure to notify OC San that the services cannot be completed within the authorized not to exceed amount of a Task Order is a material breach of this Agreement.

J. Method of Payment:

The CONSULTANT shall submit for approval by OC San, monthly invoices based on the total services which have been satisfactorily completed and specifying a percentage of completion. The CONSULTANT's billings shall be certified for payment by OC San only after OC San has determined that the CONSULTANT has completed each applicable project task.

CONSULTANT shall submit separate invoices for each Task Order on a monthly basis.

CONSULTANT understands that submitted costs are subject to Section 11 - AUDIT PROVISIONS, below.

K. Task Order Completion

Upon satisfactory completion by CONSULTANT of the work called for under the terms of the Task Order and upon acceptance of such work by OC San, CONSULTANT will be paid the unpaid balance of any money due for such work.

Upon satisfactory completion of the work performed under each Task Order and prior to final payment under each Task Order for such work or prior settlement upon termination of this Agreement, and as a condition precedent thereto, CONSULTANT shall execute and deliver to OC San a release of all claims against OC San arising under or by virtue of this Agreement other than such claims, if any, as may be specifically exempted by CONSULTANT from the operation of the release in stated amounts to be set forth therein.

L. False Claims

Pursuant to the California False Claims Act (Government Code Sections 12650-12655), any CONSULTANT that knowingly submits a false claim to OC San for compensation under the terms of this Agreement may be held liable for treble damages and up to a Ten Thousand Dollars (\$10,000) civil penalty for each false claim submitted. This section shall also be binding on all Subconsultants/Subcontractors.

The CONSULTANT or its Subconsultants/Subcontractors shall be deemed to have submitted a false claim when the CONSULTANT or its Subconsultants/Subcontractors: (a) knowingly presents or causes to be presented to an officer or employee of OC San a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by OC San; (c) conspires to defraud OC San by getting a false claim allowed or paid by OC San; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to OC San; or (e) is a beneficiary of an inadvertent submission of a false claim to OC San and fails to disclose the false claim to OC San within a reasonable time after discovery of the false claim.

M. California Department of Industrial Relations (DIR) Registration and Record of Wages:

To the extent the CONSULTANT's employees and/or its Subconsultants/Subcontractors who will perform work during the design, preconstruction, and construction phases of a construction contract for which Prevailing Wage Determinations have been issued by the DIR and as more specifically defined under Labor Code Section 1720 et seq., CONSULTANT and its Subconsultants/Subcontractors shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4, the work is subject to compliance monitoring and enforcement by the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776 and shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Penalties for non-compliance with the requirements of Labor Code section 1776 may be deducted from progress payments per Labor Code section 1776.

Pursuant to Labor Code section 1776, the CONSULTANT and its Subconsultants/Subcontractors shall furnish a copy of all certified payroll records to OC San and/or general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 16461(e).

N. Record of Expenses:

The CONSULTANT shall keep complete and accurate records of all costs and expenses incidental to services covered by this Agreement. Such records will be made available to OC San upon request.

O. Reallocation of Total Compensation:

OC San, by its Director of Engineering, shall have the right to approve a reallocation of the incremental amounts constituting the total compensation payable under the Task Order, provided that the total compensation for the Task Order is not increased.

SECTION 5. LIMITATIONS UPON SUBCONTRACTING AND ASSIGNMENT

The CONSULTANT shall not contract with any other person or entity to perform the services required without the written approval of OC San. This Agreement may not be assigned voluntarily or by operation of law without the prior written approval of OC San. If the CONSULTANT is permitted to subcontract any part of this Agreement by OC San, the CONSULTANT shall be responsible to OC San for the acts and omissions of its Subconsultant/Subcontractor, as it is for persons directly employed by the CONSULTANT. Nothing contained in this Agreement shall create any contractual relationship between any Subconsultant/Subcontractor and OC San. All persons engaged in the work will be considered employees of the CONSULTANT. OC San will deal directly with and will make all payments to the CONSULTANT.

SECTION 6. CHANGES TO SCOPE OF WORK

In the event of a change in the scope of work as requested by OC San or any other changes to the Task Order, the Parties shall execute an amendment to the Task Order setting forth with particularity all new terms of the Task Order, including, but not limited to, any additional compensation.

SECTION 7. DOCUMENT OWNERSHIP – CONSULTANT PERFORMANCE

- A. All documents in all forms (electronic, paper, etc.), including, but not limited to, studies, sketches, drawings, computer printouts, disk files, and electronic copies prepared in connection with or related to the scope of work shall be the property of OC San. OC San's ownership of these documents includes use of, reproduction or reuse of, and all incidental rights, whether or not the work for which they were prepared has been performed. OC San's ownership entitlement arises upon payment or any partial payment for work performed and includes ownership of any and all work product completed prior to that payment. This section shall apply whether the CONSULTANT's services are satisfied by the completion of the Agreement or are terminated in accordance with other provisions of this Agreement. Notwithstanding any other provision of this section or Agreement, the CONSULTANT shall have the right to make copies of all such plans, studies, sketches, drawings, computer printouts and disk files, and specifications.
- B. CONSULTANT shall not be responsible for damage caused by subsequent changes to or uses of the deliverables where the subsequent changes or uses are not authorized or approved by CONSULTANT, provided that the service rendered by CONSULTANT was not a proximate cause of the damage.
- C. Copies of Work Product

Upon completion of the work required for each Task Order, the CONSULTANT shall deliver to OC San the number of copies specified in the specific Task Order scope of work of the final report containing the CONSULTANT's findings, conclusions, recommendations, and all supporting documentation and/or final design drawings and specifications. Each Task Order will define the requirements for the deliverables.

SECTION 8. INSURANCE

A. General:

- i. Insurance shall be issued and underwritten by insurance companies acceptable to OC San.
- ii. Insurers must have an "A-" Policyholder's Rating, or better, and Financial Rating of at least Class VIII, or better, in accordance with the most current A.M. Best's Guide Rating. However, OC San will accept State Compensation Insurance Fund for the required policy of Worker's Compensation Insurance subject to OC San's option to require a change in insurer in the event the State Fund financial rating is decreased below "B". Further, OC San will require CONSULTANT to substitute any insurer whose rating drops below the levels herein specified. Said substitution shall occur within twenty (20) days of written notice to CONSULTANT by OC San or its agent.
- iii. Coverage shall be in effect prior to the commencement of any work under this Agreement.

B. General Liability:

The CONSULTANT shall maintain during the life of this Agreement, including the period of warranty, Commercial General Liability Insurance written on an occurrence basis providing the following minimum limits of liability coverage: Two Million Dollars (\$2,000,000) per occurrence with Four Million Dollars (\$4,000,000) aggregate. If aggregate limits apply separately to this Agreement (as evidenced by submission of ISO form CG 25 03 or CG 25 04), then the aggregate limit may be equivalent to the per occurrence limit. Said insurance shall include coverage for the following hazards: Premises-Operations, blanket contractual liability (for this Agreement), products liability/completed operations (including any product manufactured or assembled), broad form property damage, blanket contractual liability, independent contractors liability, personal and advertising injury, mobile equipment, owners and contractors protective liability, and cross liability and severability of interest clauses. A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement(s). If requested by OC San and applicable, XCU coverage (Explosion, Collapse and Underground) and Riggers/On Hook Liability must be included in the General Liability policy and coverage must be reflected on the submitted Certificate of Insurance.

C. Umbrella Excess Liability:

The minimum limits of general liability and automobile liability insurance required, as set forth herein, shall be provided for through either a single policy of primary insurance or a combination of policies of primary and umbrella excess coverage. Umbrella excess liability coverage shall be issued with limits of liability which, when combined with the primary insurance, will equal the minimum limits for general liability and automobile liability.

D. Automobile/Vehicle Liability Insurance:

The CONSULTANT shall maintain a policy of automobile liability insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and other vehicles providing the following minimum limit of liability coverage: combined single limit of One Million Dollars (\$1,000,000). A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement.

E. Drone Liability Insurance:

If a drone will be used, drone liability insurance must be maintained by the CONSULTANT in the amount of One Million Dollars (\$1,000,000) in a form acceptable to OC San.

F. Worker's Compensation Insurance:

The CONSULTANT shall provide such Workers' Compensation Insurance as required by the Labor Code of the State of California in the amount of the statutory limit, including Employer's Liability Insurance with a minimum limit of One Million Dollars (\$1,000,000) per occurrence. Such Worker's Compensation Insurance shall be endorsed to provide for a waiver of subrogation in favor of OC San. A statement on an insurance certificate will not be accepted in lieu of the actual endorsements unless the insurance carrier is the State of California Insurance Fund and the identifier "SCIF" and applicable endorsements are referenced on the certificate of insurance. If an exposure to Jones Act liability may exist, the insurance required herein shall include coverage for Jones Act claims.

G. Errors and Omissions/Professional Liability:

The CONSULTANT shall maintain in full force and effect, throughout the term of this Agreement, standard industry form professional liability/errors and omissions insurance coverage with coverage limits of not less than Two Million Dollars (\$2,000,000) in accordance with the provisions of this paragraph. If the policy of insurance is written on a "claims made" basis, said policy shall be continued in full force and effect at all times during the term of this Agreement and for a period of five (5) years from the date of the completion of the services hereunder.

In the event of termination of said policy during this period, the CONSULTANT shall obtain continuing insurance coverage for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement. Said coverage shall be evidenced by either a new policy evidencing no gap in coverage or by separate extended "tail" coverage with the present or new carrier.

In the event the present policy of insurance is written on an "occurrence" basis, said policy shall be continued in full force and effect during the term of this Agreement or until completion of the services provided for in this Agreement, whichever is later. In the event of termination of said policy during this period, new coverage shall be obtained for the required period to insure for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement.

The CONSULTANT shall provide to OC San a certificate of insurance in a form acceptable to OC San indicating the deductible or self-retention amounts and the expiration date of said policy and shall provide renewal certificates not less than ten (10) days prior to the expiration of each policy term.

H. Proof of Coverage:

The CONSULTANT shall furnish OC San with original certificates and amendatory endorsements effecting coverage. Said policies and endorsements shall conform to the requirements herein stated. All certificates and endorsements must be received and accepted by OC San before work commences. OC San reserves the right to require, at any time, complete, certified copies of all required insurance policies, including endorsements, effecting the coverage required. The following are approved forms that must be submitted as proof of coverage:

- | | |
|--|--|
| • Certificate of Insurance | ACORD Form 25 or other equivalent Certificate of Insurance form |
| • Additional Insurance (General Liability) | The combination of (ISO Forms) CG 2010 <u>and</u> CG 2037 |
| | All other additional insured endorsements must be submitted for approval by OC San and OC San may reject alternatives that provide different or less coverage to OC San. |
| • Additional Insured (Auto Liability) | Submit Endorsement provided by carrier for OC San's approval. |
| • Waiver of Subrogation | Submit workers' compensation waiver of subrogation endorsement provided by carrier for OC San's approval. |
| • Cancellation Notice | No endorsement is required. However, Vendor/Contractor is responsible for notifying OC San of any pending or actual insurance policy cancellation, as described in Article I. Cancellation and Policy Change Notice below. |

I. Cancellation and Policy Change Notice:

The CONSULTANT is required to notify OC San in writing of any insurance cancellation notice it receives or other knowledge of pending or actual insurance policy cancellation, within two (2) working days of receipt of such notice or acquisition of such knowledge. Additionally, the CONSULTANT is required to notify OC San in writing of any change in the terms of insurance, including reduction in coverage or increase in deductible/SIR, within two (2) working days of receipt of such notice or knowledge of same.

Said notices shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Contracts, Purchasing & Materials Management Division

J. Primary Insurance:

The general and automobile liability policies shall contain a Primary and Non-Contributory Clause. Any other insurance maintained by OC San shall be excess and not contributing with the insurance provided by the CONSULTANT.

K. Separation of Insured:

The general and automobile liability policies shall contain a "Separation of Insureds" clause.

L. Non-Limiting (if applicable):

Nothing in this document shall be construed as limiting in any way, nor shall it limit the indemnification provision contained in this Agreement or the extent to which the CONSULTANT may be held responsible for payment of damages to persons or property.

M. Deductibles and Self-Insured Retentions:

Any deductible and/or self-insured retention must be declared to OC San on the Certificate of Insurance. All deductibles and/or self-insured retentions require acceptance by OC San. At the option of OC San, either: a) the insurer shall reduce or eliminate such deductible or self-insured retention as respects OC San or b) the CONSULTANT shall provide a financial guarantee satisfactory to OC San guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

N. Defense Costs:

The general and automobile liability policies shall have a provision that defense costs for all insureds and additional insureds are paid in addition to and do not deplete any policy limits.

O. Subconsultants/Subcontractors:

The CONSULTANT shall be responsible to establish insurance requirements for Subconsultants/Subcontractors hired by the CONSULTANT. The insurance shall be in amounts and types reasonably sufficient to deal with the risk of loss involving the Subconsultants'/Subcontractors' operations and work.

P. Limits Are Minimums:

If the CONSULTANT maintains higher limits than any minimums shown above, then OC San requires and shall be entitled to coverage for the higher limits maintained by the CONSULTANT.

SECTION 9. PROJECT TEAM AND SUBCONSULTANTS

CONSULTANT shall provide to OC San, prior to execution of a Task Order, the names and full descriptions of all Subconsultants/Subcontractors and CONSULTANT's project team members anticipated to be used in performing work under a Task Order. In its proposal, CONSULTANT shall include a description of the work and services to be performed by each Subconsultant/Subcontractor and each of CONSULTANT's project team members. CONSULTANT shall include the respective compensation amounts for CONSULTANT and each Subconsultant/Subcontractor broken down as indicated in Section 4 – COMPENSATION, above.

There shall be no substitution of the listed Subconsultants/Subcontractors and CONSULTANT's project team members without prior written approval by OC San.

SECTION 10. ENGINEERING REGISTRATION

The CONSULTANT's personnel and its Subconsultants/Subcontractors shall be comprised of registered engineers and a staff of specialists and draftsmen in each department. The firm itself is not a registered engineer but represents and agrees that when the performance of this Agreement requires the services of a registered engineer, such services hereunder will be performed under the direct supervision of registered engineers who are registered in the State of California.

SECTION 11. AUDIT PROVISIONS

- A. OC San retains the reasonable right to access, review, examine, and audit any and all books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify that the CONSULTANT is in compliance with all the requirements under this Agreement. The CONSULTANT shall include OC San's right as described above in any and all of their subcontracts and shall ensure that these rights are binding upon all its Subconsultants/Subcontractors.
- B. OC San retains the right to examine CONSULTANT's books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify all direct and indirect costs, of whatever nature, which are claimed to have been incurred, or anticipated to be incurred, or to ensure CONSULTANT's compliance with all the requirements under this Agreement during the term of this Agreement and for a period of three (3) years after expiration or earlier termination of the Agreement.
- C. The CONSULTANT shall maintain complete and accurate records in accordance with generally accepted industry standard practices and OC San's policy. The CONSULTANT shall make available to OC San for review and audit all project-related accounting records and documents and any other financial data within fifteen (15) days after receipt of notice from OC San. Upon OC San's request, the CONSULTANT shall submit exact duplicates of originals of all requested records to OC San. If an audit is performed, the CONSULTANT shall ensure that a qualified employee of the CONSULTANT will be available to assist OC San's auditor in obtaining all project related accounting records and documents and any other financial data.

SECTION 12. LEGAL RELATIONSHIP BETWEEN PARTIES

The legal relationship between the Parties is that of an independent contractor and nothing herein shall be deemed to transform the CONSULTANT, its staff, independent contractors, or its Subconsultants/Subcontractors, into agents or employees of OC San and shall obtain no rights to any benefits which accrue to OC San's employees. CONSULTANT's staff performing services under the Agreement shall at all times be employees and/or independent contractors of the CONSULTANT. The CONSULTANT shall monitor and control its staff and wages, salaries, and other amounts due directly to its staff in connection with the Agreement. The CONSULTANT shall be responsible for hiring, review, and termination of its staff and shall be accountable for all reports and obligations respecting them, such as social security, income tax withholding, unemployment compensation, workers' compensation insurance, and similar matters.

SECTION 13. NOTICES

All notices hereunder and communications regarding the interpretation of the terms of this Agreement, or changes thereto, shall be effected by delivery of said notices in person or by depositing said notices in the U.S. mail, registered or certified mail, return receipt requested, postage prepaid.

Notice shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Ludwig Lopus, Principal Contracts Administrator
Copy: Daniel Berokoff, Engineering Supervisor

Notice shall be mailed to CONSULTANT at:

Michael Baker International, Inc.
5 Hutton Centre Drive, Suite 500
Santa Ana, CA 92707
Attention: John Nagle

All communication regarding the Task Order will be addressed to the Project Manager. Direction from other OC San staff must be approved in writing by OC San's Project Manager prior to action from the CONSULTANT.

SECTION 14. TERMINATION

OC San may terminate this Agreement at any time, without cause, upon giving thirty (30) days written notice to the CONSULTANT. In the event of such termination, the CONSULTANT shall be entitled to compensation for work performed on a prorated basis through and including the effective date of termination.

The CONSULTANT shall be permitted to terminate this Agreement upon thirty (30) days written notice only if the CONSULTANT is not compensated for billed amounts in accordance with the provisions of this Agreement when the same are due. Notice of termination shall be mailed to OC San at the address listed in Section 13 – NOTICES, above.

SECTION 15. COMPLIANCE

The CONSULTANT certifies by the execution of this Agreement that it pays employees not less than the minimum wage as defined by law and that it does not discriminate in its employment with regard to race, color, religion, sex, or national origin; that it is in compliance with all Federal, State, and local directives and executive orders regarding non-discrimination in employment; and that it agrees to demonstrate positively and aggressively the principle of equal opportunity in employment.

The CONSULTANT shall comply with all applicable laws, ordinances, codes, and regulations of Federal, State, and local government in all aspects related to this Agreement and any work completed for OC San.

SECTION 16. AGREEMENT EXECUTION AUTHORIZATION

Both OC San and the CONSULTANT do covenant that each individual executing this document by and on behalf of each Party is a person duly authorized to execute this Agreement for that Party.

SECTION 17. DISPUTE RESOLUTION

In the event of a dispute arising between the Parties regarding performance or interpretation of this Agreement, the dispute shall be resolved by binding arbitration under the auspices of the Judicial Arbitration and Mediation Service ("JAMS"), or similar organization or entity conducting alternate dispute resolution services.

SECTION 18. ATTORNEY'S FEES, COSTS, AND NECESSARY DISBURSEMENTS

If any action at law or inequity or if any proceeding in the form of an Alternative Dispute Resolution is necessary to enforce or interpret the terms of this Agreement, the prevailing Party shall be entitled to reasonable attorney's fees, costs and necessary disbursements in addition to any other relief to which it may be entitled.

SECTION 19. WARRANTY

CONSULTANT shall perform its services in accordance with generally accepted industry and professional standards. If, within the 12-month period following completion of its services, OC San informs the CONSULTANT that any part of the services fails to meet those standards, the CONSULTANT shall, within the time prescribed by OC San, take all such actions as are necessary to correct or complete the noted deficiency(ies).

SECTION 20. INDEMNIFICATION

To the fullest extent permitted by law, the CONSULTANT shall indemnify, protect and hold harmless OC San and all of OC San's officers, directors, employees, consultants, and agents (collectively the "Indemnified Parties"), from and against any and all claims, damages, liabilities, causes of action, suits, arbitration awards, losses, judgments, fines, penalties, costs, and expenses (including, without limitation, reasonable attorneys' fees, disbursements and court costs, and all other professional, expert, or CONSULTANT's fees and costs, and OC San's general and administrative expenses) individually, a "Claim" and collectively, "Claims", which may arise from or are in any manner related, directly or

indirectly, to any work performed or any operations, activities, or services provided by the CONSULTANT in carrying out its obligations under this Agreement to the extent of the negligent, recklessness, and/or willful misconduct of the CONSULTANT, its principals, officers, agents, employees, CONSULTANT's suppliers, Subconsultants, Subcontractors, and/or anyone employed directly or indirectly by any of them. Notwithstanding the foregoing, nothing herein shall be construed to require the CONSULTANT to indemnify the Indemnified Parties from any Claim arising solely from:

- (A) the active negligence or willful misconduct of the Indemnified Parties; or
- (B) a natural disaster or other act of God, such as an earthquake; or
- (C) the independent action of a third party who is neither one of the Indemnified Parties nor the CONSULTANT, nor its principal, officer, agent, employee, nor the CONSULTANT's supplier, Subconsultant, Subcontractor, nor anyone employed directly or indirectly by any of them.

Exceptions (A) through (B) above shall not apply, and the CONSULTANT shall, to the fullest extent permitted by law, indemnify the Indemnified Parties from Claims arising from more than one cause if any such cause taken alone would otherwise result in the obligation to indemnify hereunder.

The CONSULTANT's liability for indemnification hereunder is in addition to any liability the CONSULTANT may have to OC San for a breach by the CONSULTANT of any of the provisions of this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit the CONSULTANT's indemnification obligation or other liability hereunder. The terms of this Agreement are contractual and the result of negotiation between the Parties. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code section 1654) that ambiguities are to be construed against the drafting Party shall not be employed in the interpretation of this Agreement.

SECTION 21. DUTY TO DEFEND

Payment to the CONSULTANT by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition precedent to enforcing such Indemnified Party's rights to indemnification hereunder. In the event a final judgment, arbitration, award, order, settlement, or other final resolution expressly determines that the Claim did not arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONSULTANT, to any extent, then OC San will reimburse the CONSULTANT for any defense costs paid by CONSULTANT to the Indemnified Parties.

The CONSULTANT's indemnification obligation hereunder shall survive the expiration or earlier termination of this Agreement until such time as action against the Indemnified Parties for such matter indemnified hereunder is fully and finally barred by the applicable statute of limitations.

SECTION 22. COMPLIANCE WITH OC SAN POLICIES AND PROCEDURES

The CONSULTANT shall be required to comply with all applicable OC San policies and procedures. OC San requires the CONSULTANT and its Subconsultants/Subcontractors to

follow and ensure their employees follow all applicable Federal, State, and local regulations as well as OC San's safety standards while working at OC San locations. If during the course of the contract it is discovered that OC San's safety standards do not comply with applicable Federal, State, or local regulations, then the CONSULTANT is required to follow the most stringent regulatory requirement at no additional cost to OC San. The CONSULTANT and all of its employees and Subconsultants/Subcontractors shall adhere to all applicable Contractor Safety Standards attached hereto as Attachment "L".

SECTION 23. GOVERNING LAW

This Agreement shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in Orange County in the event any action is brought in connection with this Agreement or the performance thereof.

SECTION 24. TIME OF ESSENCE

Time is of the essence in the performance of this Agreement.

SECTION 25. CONFLICT OF INTEREST

The CONSULTANT covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of the services contemplated by this Agreement. No person having such interest shall be employed by or associated with the CONSULTANT.

SECTION 26. FORCE MAJEURE

CONSULTANT shall not be liable for any failure to perform or any impairment to its performance to the extent such failure or impairment is caused by any act of God, fire, flood, natural catastrophe, labor dispute or strike or shortage, national or state emergency, epidemic or pandemic, insurrection, riot, act of terrorism, war, act of government, any action or inaction of OC San or a third-party engaged by it, and/or any other event, occurrence or circumstance beyond the reasonable control of CONSULTANT. The compensation due CONSULTANT and the schedule governing the timing for CONSULTANT's performance shall be equitably increased and extended, respectively, to address any such impacts to CONSULTANT's performance, upon approval of OC San.

SECTION 27. LIMITATION OF LIABILITY

CONSULTANT's liability to OC San under this Agreement shall be limited to the proceeds of insurance carried by CONSULTANT under this Agreement, but only to the extent CONSULTANT actually purchases and maintains the insurance required under this Agreement.

SECTION 28. COST ESTIMATE

CONSULTANT's opinion of probable construction costs provided for herein are to be made on the basis of professional experience and qualifications and represent CONSULTANT's reasonable judgment as an experienced and qualified professional generally familiar with the construction industry. However, since CONSULTANT has no control over the cost of labor, materials, equipment, or services furnished by others, or over any contractor's methods of

determining prices, or over competitive bidding or market conditions, CONSULTANT cannot and does not guarantee that proposals, bids, or actual cost of construction will not vary from opinions of probable construction costs prepared by the CONSULTANT. If OC San wishes greater assurance as to probable construction cost, OC San may employ an independent cost estimator.

SECTION 29. ENTIRE AGREEMENT

This Agreement constitutes the entire understanding and agreement between the Parties and supersedes all previous negotiations between them pertaining to the subject matter hereof.

[THIS SECTION INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, this Agreement has been executed in the name of OC San and the CONSULTANT by their respective duly authorized officers, as of the date first written above.

MICHAEL BAKER INTERNATIONAL, INC.

By _____ Date _____

Printed Name & Title

ORANGE COUNTY SANITATION DISTRICT

By _____ Date _____
Chad P. Wanke
Board Chairman

By _____ Date _____
Kelly A. Lore
Clerk of the Board

By _____ Date _____
Ruth Zintzun
Finance & Procurement Manager

Attachments: Attachment "A" Sample Scope of Work
Attachment "B" Not Used
Attachment "C" Not Used
Attachment "D" Allowable Direct Costs
Attachment "E" Rates Proposal
Attachment "F" Not Used
Attachment "G" Not Used
Attachment "H" Not Used
Attachment "I" Not Used
Attachment "J" Not Used
Attachment "K" Not Used
Attachment "L" Contractor Safety Standards
Attachment "M" Iran Contracting Act Verification

ATTACHMENT “A”

SAMPLE SCOPE OF WORK

ATTACHMENT "A"

SAMPLE SCOPE OF WORK DESCRIPTION

OC SAN staff will develop detailed scope of work to be included in each Request for Task Order Proposal (RFTOP). The RFTOP will require Consultants to base their proposals on the scope of work included in the RFTOP. The remainder of this document are the templates typically used for design projects. Notes to scope editor are shown, although they will be removed before a scope of work is included in a RFTOP. Yellow highlighted text indicates where project specific information or a hypothetical example is given.

Design Task Order

Attachment A - Scope of Work

1 PROJECT REQUIREMENTS

Provide professional design engineering services for the project described herein.

1.1 BACKGROUND

- A. The Secondary Clarifiers at Plant No. 1 were constructed under Project Nos. P1-16 (1973), P1-36-2 (1995), and P1-82 (2005). A buried ductile iron plant water line around the secondary clarifiers feeds the scum sprayers and hose bibs. Because the plant water chemical composition is so corrosive to ductile iron, many failures have occurred.

1.2 GENERAL PROJECT DESCRIPTION

- A. This project includes the replacement of approximately 1800 feet of existing 6-inch ductile iron buried plant water piping, valves, fittings, and connections.
- B. A location map is provided in **Figure 1**.

[insert location map]

Figure 1 - Project Location Map

1.3 PROJECT ELEMENTS

- A. **Element 1: Piping** – Replace the existing 1,800 feet of 6-inch buried ductile iron plant water piping with new 6-inch plant water piping.
- B. Assumptions for level of effort:
1. 1,600 feet of piping shall be below grade and 200 feet shall be either above or below grade.
 - a. 1,600 feet of piping is located around the Secondary Clarifiers. Assume high-density polyethylene (HDPE) as the pipe material with appropriate dimension ratio value.
 - b. 200 feet of piping will re-route the existing plant water line on the northwest end of the Secondary Clarifiers. Recent projects disconnected the existing plant water line at various locations resulting in an incomplete loop. This piping will reconnect the lines to allow for a complete loop. See Exhibit 13.1 for photos and Exhibit 13.3 for proposed routing design.
 - (1) For above grade pipe material, assume cement-lined ductile iron or fiberglass-reinforced plastic.
 2. Follow existing alignment with new pipe. New alignments shall be kept as close to the existing alignment as feasible.
 - a. The Secondary Effluent Junction Box No. 4 (SEJB-4), located at the southwest corner of the Secondary Clarifiers, is congested with various utilities, such as plant water, secondary effluent, and reclaimed water lines, and associated valves. Follow the existing alignment in this important area.
 - b. Concrete encasement of HDPE, located on the west side of the Secondary Clarifiers on Fuentes Road, was installed under project P1-102 (2006). Assume potholing is necessary to survey the edge of the concrete and confirm the limits of the existing concrete encasement

do not interfere with this project. As much as possible, the new alignment shall avoid the concrete encasement.

1.4 PROJECT SCHEDULE

- A. **Table 1** lists major project deliverables along with Orange County Sanitation District's (OC SAN) review and approval periods. CONSULTANT shall comply with the deadlines indicated in that table. OC SAN will consider an alternative CONSULTANT proposed schedule provided it is consistent with OC SAN resources, schedule constraints, and adds value. The negotiated durations will set the design baseline schedule.

Table 1 – Project Milestones and Deadlines

MILESTONE	DEADLINE
Kickoff Meeting	The kickoff meeting will be scheduled to coincide with the Project Notice to Proceed (NTP).
Preliminary Design Memo (PDM)	[XX] workdays from Preliminary Design Phase NTP.
OC SAN Review of PDM	10 workdays from receipt of PDM.
Submit Design Submittal 3 (DS3)	[YY] workdays from approval of PDM.
OC SAN Review of DS3	15 workdays from receipt of DS3.
Submit Final Design Submittal (FDS)	15 workdays from receipt of OC SAN comments on DS3.
OC SAN Review of FDS	10 workdays from receipt of FDS.
Submit Final Technical Plans and Specifications (FTPS)	15 workdays from receipt of OC SAN comments on FDS.
Total	[ZZZ] workdays

1.5 PROJECT MANAGEMENT

- A. CONSULTANT shall be responsible for managing CONSULTANT's project execution, schedule, budget, subconsultants, and coordination with other projects.
- B. Per **Exhibit 18**, PMWeb will be used for the management of this agreement.
- C. [Monthly Progress Report: Submit monthly progress reports at the same time as monthly invoices that include the following contents:
1. Work activities completed to date, in the current reporting period, and projected for the coming month.
 2. A brief description of outstanding issues and potential cost, schedule, quality impacts.
 3. Potential changes in the project scope or design scope.
 4. Any corrective actions needed to avoid potential impacts.
 5. Budget status: actual costs to date, costs to complete, and costs at completion.
 6. Schedule status: variances between scheduled and forecasted milestone dates.]
- D. Monthly Invoices: Provide a monthly cost report and/or invoices, which shall document the man-hours and billing rate for each person that works on the project, and shall include the following:
1. Budget
 2. Current billing period invoicing
 3. Previous billing period "total invoiced to date"
 4. Budget Amount Remaining
 5. Current billing period "total percent invoiced to date"

1.6 QUALITY CONTROL

- A. Provide Quality Assurance and Quality Control of the work.
- B. Provide documentation upon request that the CONSULTANT has performed a quality control review in-house, and all the comments have been addressed prior to providing any submittals to OC SAN.

1.7 PROJECT MEETINGS

- A. CONSULTANT shall communicate throughout the project to keep OC SAN apprised of the job, review work-in-progress, share information, discuss project submittals, present findings of technical analyses, receive and resolve comments, and obtain decisions and direction by OC SAN staff.
- 1. **Table 2** below lists the anticipated meetings and site visits. Microsoft Teams shall be used for meetings. CONSULTANT will provide an agenda 2 workdays prior to each meeting. Meeting minutes will be submitted to the OC SAN project manager for review within 3 workdays of the meeting.

Table 2 – Project Assumed Meetings and Site Visits

DESIGN ACTIVITY	MEETINGS	SITE VISITS
Kickoff Meeting	1 (1-hour)	
PDM	Progress meeting (1-hour, every 2 weeks)	8 hours
PDM Workshop	2 (1-hour)	
DS3	Progress meeting (1-hour, every 2 weeks)	8 hours
DS3 Workshop	2 (1-hour)	
FDS	Progress meeting (1-hour, weekly)	
FDS Workshop	1 (1-hour)	
FTPS	Progress meeting (1-hour, weekly)	
Construction Services	6 hours	24 hours
Closeout	4 hours	12 hours

1.8 SUBMITTAL REVIEWS

- A. Deliverables (other than specifications) shall be submitted in searchable PDF format with no hard copy. Deliverables shall be bookmarked and hyperlinked for navigation per **Exhibit 14**.
- B. OC SAN has standardized on the use of Bluebeam Revu for reviewing and providing comments to PDF files. The purpose of the studio session is to provide review and collaboration. OC SAN staff will create the Bluebeam studio session, invite attendees, configure, and manage the studio session. Make drawing submittals in Bluebeam and respond to OC SAN comments in Bluebeam per **Exhibit 15**.

1.9 SPECIFICATIONS

- A. Prior to preparing or editing specifications, CONSULTANT shall meet with OC SAN staff to determine which OC SAN and CONSULTANT provided specifications should be included in the design. After discussions, all specifications should be loaded in Microsoft Teams (Teams) early in design and prior to editing for DS3.
- B. Tailor all specifications to project and remove requirements that do not apply.
- C. Unless a CONSULTANT is using their own specification management software, Specifications should remain in Teams for editing throughout design. Make all edits to specifications hosted in Teams. Unless agreed to, Specifications should not be removed from Teams or edited elsewhere.
- D. Provide specifications as Microsoft Word (Word) files with Track Changes enabled throughout design.

- E. OC SAN staff will review specifications during submittal review periods. CONSULTANT shall respond to OC SAN comments using Word “Reply” and “Resolve.” CONSULTANT shall “Reply” to each OC SAN comment describing how the comment will be addressed and revise the specification, as needed, to address the comment. “Resolve” will be used by the reviewer or designee to confirm their comment has been addressed. For more information see **Exhibit 16**.
- F. Prior to advertisement, all Word comments and revisions shall be Track Changes accepted, rejected, resolved, or deleted by OC SAN staff prior to bid.

2 PRELIMINARY DESIGN

All significant material and equipment decisions are to be made before the start of Design. At the end Preliminary Design, major design elements shall be fixed, and major equipment, footprints, and utility connection locations shall be well established. The extent of the design and the number and type of drawings shall also be established.

2.1 PRELIMINARY DESIGN AND PDM

- A. The PDM shall consist of a PowerPoint presentation. Present PDM findings and recommendations to OC SAN in a stakeholder meeting using the PowerPoint presentation mentioned in this section for consensus before the start of Design.
- B. Identify any equipment that has one competitive supplier (i.e., sole source). In those cases, recommend an appropriate procurement strategy compatible with California Law and OC SAN policies.
- C. Develop 2 conceptual design alternatives for the plant water piping alignment.
 - 1. Alternatives:
 - a. Reuse exiting alignment and existing points of connection
 - b. Alternate alignment along tunnels in and around secondary clarifiers
 - 2. Perform the following with each alternative:
 - a. Cost, benefit, and life cycle analysis.
 - b. Identify plant water construction shutdown requirements with estimated durations.
 - c. Identify construction access requirements and limitations.
 - d. Prepare preliminary drawings (sketches).
 - 3. Discuss the available alternatives with OC SAN. The PDM shall include the recommendation alternative.
- D. Prepare drawings showing:
 - 1. Proposed alignment of piping
 - 2. Proposed piping materials and quantities
 - 3. Proposed quantity and type of valves and valve cans
 - 4. Proposed connection points which include the following:
 - a. New replacement pipes connecting to existing main plant water line
 - b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
 - 5. Demolition of existing ductile iron pipes and valves
 - 6. Proposed design of new valves and valve cans
 - 7. Proposed design of connection points
 - a. New replacement pipes connecting to existing main plant water lines

- b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
- 8. Proposed design of pipe supports by typical detail and max spacing table
- E. Summarize key constructability and construction sequencing constraints.
 - 1. Develop process flow schematic of the components of the plant water system at Plant No. 1 that impact the pipelines being replaced.
- F. Prepare preliminary construction schedule.
- G. Prepare P&IDs: Fully detailed for each design "module", e.g., 1 pump set typical of all with proposed tagging strategy.
- H. Perform any potholing activities required for the concrete encasement survey specified under Element 1.
- I. Quantify soil contamination by determining the volume of excavation work needed to perform the Work. Coordinate with OC SAN ENGINEER to determine the area of excavation. Soil testing is not necessary.
- J. Develop testing requirements. Assume:
 - 1. Pressure leak and valve testing shall be included.
 - 2. Plant water operating pressure is 110 PSI.

2.2 PRELIMINARY DESIGN CONSTRUCTION COST ESTIMATE

- A. Prepare an AACE International Class 3 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01. Data used to prepare the cost estimate shall be included as an attachment to the PDM.
 - 1. Determine project specific and appropriate values to use for the percentages for profit, bond, and insurance.
 - 2. Costs for project level allowance, insurance, profit, and bond shall be cumulative and listed as individual line items.
 - 3. Allowances or mark ups should be well explained and itemized.
 - a. Include "Market Volatility" allowance of xx%.(revise based on the market conditions)
 - b. Do not setup allowance for change orders.
 - c. Do not escalate to midpoint of construction - this is by OC SAN.
 - 4. Specialty work should be recently (under 6 months) estimated by vendor.
 - a. For example, sewer bypassing services should be estimated by vendor (i.e., Rain 4 Rent).
 - b. Provide vendor quotes for high-cost equipment.
 - c. Minor equipment costs may be documented by written telephone quotations.
 - 5. Provide breakdown of lump sum costs.
 - 6. Show labor rates so they can be checked.
 - 7. Provide all back back up for all documentation obtained for the cost estimate purposes. The cost estimate back up shall have the date and the vendor name/contact name. If catalog price is used, provide the year of that publication.
- B. Prepare estimate of construction duration. The suggested construction duration shall take in considerations the verifiable lead time for all equipment.

3 DESIGN

Prepare biddable plans, technical specifications, other Bid Documents, and any associated design calculations, required to complete the Project Elements.

3.1 DS3 DELIVERABLES

- A. Meet at a 50% completion level with OC SAN staff to review design progress. Formal deliverables are not necessary. QA/QC is also not required for this preview.
- B. At this submittal, the design is essentially finished and submitted as complete. DS3 shall include all finished and checked plans and specifications. OC SAN staff will review DS3 and provide comments to the drawings and specifications. The CONSULTANT should be finished with no remaining design work except for OC SAN comments provided at DS3 review and their incorporation at FDS.
- C. [Prepare construction drawings in CAD conforming to OC SAN's CAD Manual. A CAD compliance check will be performed at DS3 (Exhibit 17, Chapter 8 explains the CAD compliance check, and Appendix D contains the "CAD Standards Compliance Checklist" summarizing all items checked by OC SAN). OC SAN will provide base layers and utilities for Work locations within the treatment plant boundaries.]

3.2 DS3 COST ESTIMATE

- A. Prepare an AACE International Class 2 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01 based on the DS3 design. Data used to prepare the cost estimate shall be included as an attachment to DS3.
- B. Prepare estimate of construction duration.

3.3 FDS DELIVERABLES

- A. Final Design Submittal (FDS) is for OC SAN to confirm all comments from DS3 have been addressed and incorporated and add any additional comments.

3.4 FTSP DOCUMENTS

- A. Final Technical Plans and Specifications is for the CONSULTANT to address and incorporate all comments and provide all necessary stamps and signatures for a complete bid package suitable for advertisement by OC SAN.

3.5 CONSTRUCTION COST ESTIMATE "ENGINEER'S ESTIMATE"

- A. 30 calendar days prior to advertisement, refresh the DS3 Class 2 cost estimate. Get updated vendor quotes used to prepare the DS3 cost estimate. This will become the Engineer's Estimate published in the front-end documents.

3.6 PERMITTING ASSISTANCE ([ALLOCATE 60 HOURS] [NOT INCLUDED IN THIS AGREEMENT])

- A. [For all applicable Project Elements of this Scope of Work, provide Bid Documents that ensure that the design complies with all conditions of existing permits and permits required to construct and implement this project. Testing, construction drawings, specifications, and supplemental drawings shall be prepared, as necessary, in the format required to obtain all permits.]
- B. Assist OC SAN in obtaining permits. This assistance shall include identifying applicable permits, completing required design, plan preparation, application forms provided by OC SAN, preparing supporting documentation for the permit applications as required by the issuing agency, furnishing the required number of copies of all construction drawings and exhibits, and attend meetings with permitting agencies at the request of OC SAN.
- C. Except for construction contractor-furnished permits, OC SAN staff will execute all applications. CONSULTANT shall determine the cost and requirements of all permits. All permit fees will be paid directly by OC SAN and will not be part of CONSULTANT's fee.
- D. Submit all supporting documentation in a timely fashion for all permits required for this project as described below.
 - 1. Caltrans Encroachment Permits

- a. Determine if encroachment permits or other types of permits are required by Caltrans for the design and construction phases. Provide the work necessary to obtain such permits including coordinating and attending meetings.

2. City/County Encroachment Permits

- a. Provide coordination, work effort, and attend meetings, as required, to obtain encroachment permits from each city and agency who has jurisdiction. Process the plans through the cities and agencies for approval, revise plans, and meet with them, as required, to obtain approval.]

3.7 BID SUPPORT SERVICES

- A. Provide answers to bidder's questions related to the design. Provide revisions to specifications and drawings when needed for addendum.
- B. Within 2 weeks of the bid opening date, prepare conformed document set (drawings, databases, specification, and other required materials) that incorporates the addenda. See requirements of OC SAN's CAD Manual.

3.8 POPULATE PMWEB LIST OF SUBMITTALS (ALLOCATE 24 HOURS)

- A. PMWeb is used to manage communication with the contractor. OC SAN uses an Excel template to populate the list of all submittals. The CONSULTANT shall review each project specification and complete the Submittal Items Template as follows:
 1. Enter the list of project specifications.
 2. Enter the list of commissioning packages. Commissioning packages are defined by Section 01810, Commissioning.
 3. Enter the following information for each submittal item.
 - a. Specification section: enter the specification section requiring the submittal.
 - b. Submittal Item description: enter the description of the submittal. Submittal items that refer to multiple specifications shall include referenced specification sections in brackets.
 - c. Comments: enter notes, comments, or clarifications. This field is optional.
 - d. Commissioning package: enter the commissioning package of the submittal item. Submittal items shall be duplicated when the same submittal is required for multiple commissioning packages. Items shall be separated into mobilization, general construction, or a commissioning package defined by the project specifications.
 - e. Phase: Identify which phase each submittal is required to be approved.
 - f. Retention: Specify if the submittal is a Project File or Facility Record based on OC SAN's Records Retention Policy.
 - g. Lead time: Specify the appropriate number of workdays that OC SAN has to review the particular submittal.
 - h. Load: Specify if the submittal should be loaded into PMWeb prior to NTP, upon contractor approval, or prior to the start of commissioning.
- B. OC SAN will provide a PMWeb Master Submittal Items template that includes the submittals required by OC SAN's Master Specifications. The CONSULTANT shall not deviate from the Master PMWeb Submittal Items, except as required by the project specific specifications. The CONSULTANT shall develop submittal items for specifications that are not part of OC SAN's Master Specifications.
- C. OC SAN will provide a 1-hour virtual training on the use of the PMWeb Master Submittal Items Template.
- D. The CONSULTANT shall populate, receive comments, address comments, and provide completed submittal form as follows:
 1. 20 workdays after advertisement date.

3.9 SAFETY AND RISK MEETING

- A. Ensure that an OC San Risk Management safety and security professional has been assigned to the project.
- B. CONSULTANT shall prepare and meet with OC San Risk Management personnel at all design stages to review Exhibit 11 Sample Full Project Safety Review Plan and Exhibit 12 Sample Risk Management Check List. This shall be completed in accordance with Exhibit 4 Risk Management Requirements.
- C. CONSULTANT shall update Exhibits 11 and 12 throughout the design phases. CONSULTANT shall provide OC San Risk Management with the final copies of Exhibit 11 and Exhibit 12 at completion of the Design Project.

4 CONSTRUCTION SERVICES

OC SAN will administer and provide field inspection for construction contracts. Construction and installation support services shall be provided by the CONSULTANT on an as-needed basis and as requested by OC SAN. The services are indicated below.

4.1 SUBMITTAL REVIEWS (ALLOCATE 15 HOURS)

- A. OC SAN will manage submittal review. The CONSULTANT shall use PMWeb to review and return comments to OC SAN. Return comments within 5 workdays.

4.2 REQUESTS FOR INFORMATION (RFIS) (ALLOCATE 15 HOURS)

- A. OC SAN will manage the processing of RFI's. When requested by OC SAN, CONSULTANT shall return written responses to OC SAN within 5 workdays of receipt of RFI using PMWeb. Generate necessary sketches, figures, and modifications to the drawings for clarifications.

4.3 PROGRESS MEETINGS AND SITE VISITS

- A. Refer to **Table 2**.

4.4 RECORD DRAWINGS

- A. Verify that the Contractor's As-Built set correctly reflects the information included in the approved shop drawings, RFIs, approved Field Change Orders, plan clarifications, plan changes, and other deviations from the conformed drawings, and that the information in the set is complete.
- B. Draft Record Drawings shall be submitted to OC SAN within 4 weeks of receipt from OC SAN of the approved Contractor's As-Built drawings. The Final Record Drawings shall be submitted within one week of receipt of OC SAN comments on the Draft Record Drawings.
- C. Prepare Draft Record Drawings based on the Final Field Markup Set for all drawings in accordance with the requirements in the CAD Manual. Submit the Draft Record Drawings to the OC SAN Resident Engineer. The Draft Record Drawings will be reviewed for content and CAD compliance by OC SAN staff. If no comments are identified, CONSULTANT shall prepare the Final Record Drawings and submit them along with the Contractor's field markup set to the Project Manager. For content and placement of record drawing stamp, see CAD Manual.
- D. Submit an electronic copy of the record drawings to OC SAN for review and approval. The acceptance of the record drawings shall be deemed a condition for completion of work.
- E. Contractor-generated drawings described in the Design Guidelines and the shop drawings will not be updated by CONSULTANT. The format and quantities for delivery of the submittals shall be listed below:

Contents	Draft Record Drawings	Final Record Drawings
All related electronic files, including CAD and compiled PDFs.	One copy to be uploaded to Microsoft Teams.	One copy to be uploaded to Microsoft Teams.

4.5 EQUIPMENT INFORMATION DATABASE (EID) (ALLOCATE [X] HOURS [NOT INCLUDED IN THIS AGREEMENT])

- A. OC SAN uses Maximo software to manage and track asset information. When new assets are added or existing assets are modified by a project, an EID Excel spreadsheet is used to populate or update Maximo asset information. CONSULTANT shall meet with OC SAN EIM staff to request an EID spreadsheet pre-populated with the new or modified assets. OC SAN staff will provide training on how to populate the EID spreadsheet. Field work will be needed to apply equipment tags and record equipment nameplate information and serial numbers to populate the EID. Coordinate with Maintenance Specialists (David Haug or designee, Div. 870) to walk new facilities to verify accuracy of P&IDs and EID.

4.6 [UPDATE BASELINE DRAWINGS]

5 STAFF ASSISTANCE

OC SAN staff member or designee assigned to work with CONSULTANT on the design of this project is Jessica Cheung. Phone (714) 593-7147, e-mail jcheung@ocsan.gov.

6 EXHIBITS

- A. Exhibits 1-3, 5-10 – Not Used
- B. Exhibit 4 – Risk Management Requirements
- C. Exhibit 11 – Sample Full Project Safety Review Plan
- D. Exhibit 12 – Sample Risk Management Checklist
- E. Exhibit 13 – Project Reference Material
 - a. 13.1 – Photos
 - b. 13.2 – Plant 1 Plant Water System Map
 - c. 13.3 – Proposed Design Idea (The CONSULTANT may start with this conceptual design.)
 - d. 13.4 – Proposed Valve Cans (The CONSULTANT may start with this conceptual design.)
 - e. 13.5 – Record Drawings (Available Upon Request)
 - (1) P1-82, Activated Sludge Plant Rehabilitation (2005)
 - (2) P1-36-2, Secondary Treatment Improvements at Plant No. 1 (1995)
 - (3) P1-16, 46 MGD Activated Sludge Plant at Reclamation Plant No. 1 (1973)
 - (4) P1-102, Secondary Activated Sludge Facility 2 at Plant No.1 (2006)
- F. Exhibit 14 – BlueBeam Designer Training for Submission
- G. Exhibit 15 – BlueBeam Designer User Training
- H. Exhibit 16 – Spec Review using Microsoft Word and Teams
- I. Exhibit 17 – [CAD Standard Manual](#)
- J. Exhibit 18 – PMWeb

JC:tk

PROFESSIONAL DESIGN SERVICES AGREEMENT

This PROFESSIONAL DESIGN SERVICES AGREEMENT (Agreement), to be effective this 1st day of July, 2024, is made and entered into by and between:

ORANGE COUNTY SANITATION DISTRICT
hereinafter referred to as "OC San"

AND

PROJECTLINE TECHNICAL SERVICES, INC.
hereinafter referred to as "CONSULTANT"

individually referred to as the "Party" and collectively as the "Parties".

RECITALS

WHEREAS, in accordance with Ordinance No. OC SAN-61 and pursuant to a Request for Qualifications ("Underlying RFQ"), the Board of Directors of OC San, by action on May 22, 2024, approved the award of the Agreement for **CONTRACT NO. FE24-00-13**, to CONSULTANT to provide services for selected projects on a task order (Task Order) basis from July 1, 2024 to June 30, 2027; and

WHEREAS, consistent with the Underlying RFQ, the CONSULTANT has been prequalified to perform services for the following project types: Project Type 1: Site Works, Building and Safety and Project Type 3: Process, Electrical and Instrumentation & Control (I&C); and

WHEREAS, for Task Orders estimated to cost \$100,000 or less, the Director of Engineering, with concurrence of the Purchasing Manager, may solicit a proposal from one (1) firm on the prequalified list, which will include the project types for which the consultants are prequalified; and

WHEREAS, the CONSULTANT is qualified to provide and has agreed to provide the necessary professional engineering and related services under this Agreement; and

WHEREAS, by this Agreement, the Parties intend to set forth the general terms and conditions that will apply to any specific project for which CONSULTANT is given a Task Order by OC San.

NOW, THEREFORE, OC San and the CONSULTANT mutually agree as follows:

SECTION 1. SCOPE OF AGREEMENT

OC San, at its sole discretion, may, from time to time during the term of this Agreement, issue a Request for Task Order Proposal ("RFTOP") setting forth the detailed requirements and scope of work to be performed on the identified project and thereafter, upon receipt of a proposal from the CONSULTANT, may issue a Task Order to proceed with the work. The scope of work will be in a form attached hereto as Attachment "A" – Sample Scope of Work.

Upon execution by OC San, the Task Order shall become an operative part of this Agreement. Should any conflict or inconsistency exist in the contract documents identified in this section, the conflict or inconsistency shall be resolved by applying the provisions in the highest priority document, which shall be determined in the following order of priority:

1. Agreement and any amendments thereto
2. the Task Order
3. the RFTOP

SECTION 2. TASK ORDER ISSUANCE BY OC SAN

The Task Order issued by OC San shall, specifically or by reference to the RFTOP and corresponding proposal, set forth the terms that will apply to the specific project for which the services will be rendered. Those terms shall include, but not be limited to, scope of work, time for performance, and compensation.

SECTION 3. TERM

This Agreement shall commence on the effective date of this Agreement and terminate on June 30, 2027, unless further extended by written agreement signed by the Parties. Any work that is required by a Task Order and is not finished by the date of termination shall be continued and completed by the CONSULTANT and the terms and conditions of this Agreement shall continue in effect for that time. OC San may, at its option, renew this Agreement for two (2) additional terms of one (1) year each, for a maximum contract duration of five (5) years.

SECTION 4. COMPENSATION

The total compensation payable to the CONSULTANT pursuant to this Agreement shall not exceed One Million Dollars (\$1,000,000) per year in accordance with the terms described in SECTION 3 - TERM. The compensation includes, but is not limited to, fees for professional engineering services based on the CONSULTANT's burdened labor rates, overhead, and profit, and fees from the CONSULTANT's subconsultants/subcontractors (Subconsultants/Subcontractors). The specific amount of compensation payable to the CONSULTANT for services rendered on an individual project, pursuant to a Task Order, shall be established for each Task Order and shall not exceed Five Hundred Thousand Dollars (\$500,000) per individual Task Order unless authorized by OC San's Board of Directors. The CONSULTANT agrees and acknowledges that the execution of this Agreement does not in any way guarantee that a Task Order will be issued to the CONSULTANT. Moreover, execution of this Agreement shall not entitle the CONSULTANT to any form of payment or compensation from OC San without OC San first having issued a written Task Order.

A. Total Compensation

Total compensation for any Task Order shall not exceed the amount indicated in the approved Task Order and any approved amendments thereto.

B. Labor

As a portion of the total compensation to be paid to CONSULTANT, OC San shall pay to CONSULTANT a sum equal to the burdened salaries (salaries plus benefits) actually paid

by CONSULTANT charged on an hourly-rate basis to the project and paid to CONSULTANT's personnel. For each Task Order, the cost of benefits for CONSULTANT shall be based on the fringe rates identified in Attachment "E" – Rates Proposal. Upon request of OC San, CONSULTANT shall provide OC San with certified payroll records of all employees' work that is charged to the project.

C. Overhead

As a portion of the total compensation to be paid to CONSULTANT, for each Task Order, OC San shall compensate CONSULTANT for overhead at the rates equal to the percentage of burdened labor as specified in Attachment "E" – Rates Proposal.

D. Profit

For each Task Order, profit shall be ten percent (10%) of burdened labor and overhead for all CONSULTANT fees and its Major Subconsultants (Architecture & Engineering [A&E] consulting services) whose fees for services are greater than or equal to \$100,000. Profit shall remain fixed through the term of this Agreement, inclusive of any renewals identified in Section 3 – TERM.

As a portion of the total compensation to be paid to CONSULTANT and its Major Subconsultants, OC San shall pay profit for all services rendered by CONSULTANT and its Major Subconsultants for the Task Order as specified in the previous paragraph.

E. Subconsultants

For each Task Order, any Minor Subconsultant (A&E consulting services) whose fees for services are less than \$100,000 and any Subconsultant/Subcontractor (non-A&E consulting services), CONSULTANT shall pay to Subconsultant/Subcontractor total compensation based on an established hourly rate schedule by personnel classification. The hourly rates shall cover burdened salary costs, overhead and profit. The compensation for each Minor Subconsultants and Subconsultants/Subcontractors (non-A&E consulting services), including both labor related fees, and direct costs shall not exceed the amount, as negotiated prior to award of a Task Order.

For each Task Order, any Major Subconsultant (A&E consulting services) whose fees for services are greater than or equal to \$100,000, total compensation for labor will be based on burdened labor rates, overhead, and profit, as negotiated prior to award of Task Order. Prior to award of Task Order, the CONSULTANT shall provide to OC San, if available, an audit performed for another public agency which documents the Major Subconsultant's labor burden rate and overhead rate. This audit shall be the most current available and have been conducted for a period that ended within twelve months of the task order proposal due date. This information shall be provided by CONSULTANT within ten (10) business days from request by OC San.

F. Direct Costs

OC San shall reimburse CONSULTANT and its Subconsultants/Subcontractors the actual costs of permits and associated fees, travel, licenses, and other services in an amount not to exceed the sums set forth in each approved Task Order. OC San shall also pay to CONSULTANT actual costs for equipment rentals, leases or purchases with prior written

approval of OC San. Upon request, CONSULTANT shall provide to OC San receipts and other documentary records to support CONSULTANT's request for reimbursement of these amounts, refer to Attachment "D" – Allowable Direct Costs. All incidental expenses shall be included in the overhead cost pursuant to this SECTION 4 – COMPENSATION.

G. Other Direct Costs

OC San will reimburse the CONSULTANT for Other Direct Costs incurred by CONSULTANT and its Subconsultants/Subcontractors due to modifications in the scope of work resulting from field investigations and field work required by the Task Order. These items may include special equipment, test equipment and tooling, and other materials and services not previously identified. Refer to Attachment "D" – Allowable Direct Costs for payment information.

H. Reimbursable Direct Costs

OC San will reimburse the CONSULTANT for reasonable travel and business expenses as described in this section and further described in Attachment "D" – Allowable Direct Costs. The reimbursement of the above-mentioned expenses will be based on an "accountable plan" as considered by the Internal Revenue Service (IRS). The plan includes a combination of reimbursements based upon receipts and a "per diem" component approved by the IRS. The most recent schedule of the per diem rates utilized by OC San may be found on the U.S. General Services Administration website at <https://www.gsa.gov/travel/plan-book/per-diem-rates>.

The CONSULTANT shall be responsible for the most economical and practical means of management of reimbursable costs inclusive, but not limited to, travel, lodging, and meals arrangements. OC San shall apply the most economic and practical method of reimbursement which may include reimbursements based upon receipts and/or "per diem" as deemed the most practical.

CONSULTANT shall be responsible for returning to OC San any excess reimbursements after the reimbursement has been paid by OC San.

Travel and travel arrangements – Any travel involving airfare, overnight stays, or multiple day attendance must be approved by OC San in advance.

Local travel is considered travel by the CONSULTANT within OC San general geographical area which includes Orange, Los Angeles, Ventura, San Bernardino, Riverside, San Diego, Imperial, and Kern Counties. Automobile mileage is reimbursable if CONSULTANT is required to utilize a personal vehicle for local travel.

Lodging – Overnight stays will not be approved by OC San for local travel. However, under certain circumstances overnight stay may be allowed at the discretion of OC San based on reasonableness of meeting schedules and the amount of time required for travel by the CONSULTANT. Such determination will be made on a case-by-case basis and at the discretion of OC San.

Travel Meals – Per diem rates as approved by the IRS shall be utilized for travel meals reimbursements. Per diem rates shall be applied to meals that are appropriate for travel times. Receipts are not required for the approved meals.

Additional details related to the reimbursement of the allowable direct costs are provided in Attachment "D" – Allowable Direct Costs.

I. Limitation of Costs

If, at any time, CONSULTANT estimates the cost of performing the services described in CONSULTANT's proposal will exceed seventy-five percent (75%) of the not to exceed amount of the Task Order, including any approved additional compensation, CONSULTANT shall notify OC San immediately, in writing. The written notice shall indicate the additional amount necessary to complete the services. Any cost incurred in excess of the approved not to exceed amount, without the express written consent of OC San's authorized representative, shall be at CONSULTANT's own risk. This written notice shall be provided separately from, and in addition to, any notification requirements contained in the CONSULTANT's invoice and monthly progress report. Failure to notify OC San that the services cannot be completed within the authorized not to exceed amount of a Task Order is a material breach of this Agreement.

J. Method of Payment:

The CONSULTANT shall submit for approval by OC San, monthly invoices based on the total services which have been satisfactorily completed and specifying a percentage of completion. The CONSULTANT's billings shall be certified for payment by OC San only after OC San has determined that the CONSULTANT has completed each applicable project task.

CONSULTANT shall submit separate invoices for each Task Order on a monthly basis.

CONSULTANT understands that submitted costs are subject to Section 11 - AUDIT PROVISIONS, below.

K. Task Order Completion

Upon satisfactory completion by CONSULTANT of the work called for under the terms of the Task Order and upon acceptance of such work by OC San, CONSULTANT will be paid the unpaid balance of any money due for such work.

Upon satisfactory completion of the work performed under each Task Order and prior to final payment under each Task Order for such work or prior settlement upon termination of this Agreement, and as a condition precedent thereto, CONSULTANT shall execute and deliver to OC San a release of all claims against OC San arising under or by virtue of this Agreement other than such claims, if any, as may be specifically exempted by CONSULTANT from the operation of the release in stated amounts to be set forth therein.

L. False Claims

Pursuant to the California False Claims Act (Government Code Sections 12650-12655), any CONSULTANT that knowingly submits a false claim to OC San for compensation under the terms of this Agreement may be held liable for treble damages and up to a Ten Thousand Dollars (\$10,000) civil penalty for each false claim submitted. This section shall also be binding on all Subconsultants/Subcontractors.

The CONSULTANT or its Subconsultants/Subcontractors shall be deemed to have submitted a false claim when the CONSULTANT or its Subconsultants/Subcontractors: (a) knowingly presents or causes to be presented to an officer or employee of OC San a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by OC San; (c) conspires to defraud OC San by getting a false claim allowed or paid by OC San; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to OC San; or (e) is a beneficiary of an inadvertent submission of a false claim to OC San and fails to disclose the false claim to OC San within a reasonable time after discovery of the false claim.

M. California Department of Industrial Relations (DIR) Registration and Record of Wages:

To the extent the CONSULTANT's employees and/or its Subconsultants/Subcontractors who will perform work during the design, preconstruction, and construction phases of a construction contract for which Prevailing Wage Determinations have been issued by the DIR and as more specifically defined under Labor Code Section 1720 et seq., CONSULTANT and its Subconsultants/Subcontractors shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4, the work is subject to compliance monitoring and enforcement by the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776 and shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Penalties for non-compliance with the requirements of Labor Code section 1776 may be deducted from progress payments per Labor Code section 1776.

Pursuant to Labor Code section 1776, the CONSULTANT and its Subconsultants/Subcontractors shall furnish a copy of all certified payroll records to OC San and/or general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 16461(e).

N. Record of Expenses:

The CONSULTANT shall keep complete and accurate records of all costs and expenses incidental to services covered by this Agreement. Such records will be made available to OC San upon request.

O. Reallocation of Total Compensation:

OC San, by its Director of Engineering, shall have the right to approve a reallocation of the incremental amounts constituting the total compensation payable under the Task Order, provided that the total compensation for the Task Order is not increased.

SECTION 5. LIMITATIONS UPON SUBCONTRACTING AND ASSIGNMENT

The CONSULTANT shall not contract with any other person or entity to perform the services required without the written approval of OC San. This Agreement may not be assigned voluntarily or by operation of law without the prior written approval of OC San. If the CONSULTANT is permitted to subcontract any part of this Agreement by OC San, the CONSULTANT shall be responsible to OC San for the acts and omissions of its Subconsultant/Subcontractor, as it is for persons directly employed by the CONSULTANT. Nothing contained in this Agreement shall create any contractual relationship between any Subconsultant/Subcontractor and OC San. All persons engaged in the work will be considered employees of the CONSULTANT. OC San will deal directly with and will make all payments to the CONSULTANT.

SECTION 6. CHANGES TO SCOPE OF WORK

In the event of a change in the scope of work as requested by OC San or any other changes to the Task Order, the Parties shall execute an amendment to the Task Order setting forth with particularity all new terms of the Task Order, including, but not limited to, any additional compensation.

SECTION 7. DOCUMENT OWNERSHIP – CONSULTANT PERFORMANCE

A. All documents in all forms (electronic, paper, etc.), including, but not limited to, studies, sketches, drawings, computer printouts, disk files, and electronic copies prepared in connection with or related to the scope of work shall be the property of OC San. OC San's ownership of these documents includes use of, reproduction or reuse of, and all incidental rights, whether or not the work for which they were prepared has been performed. OC San's ownership entitlement arises upon payment or any partial payment for work performed and includes ownership of any and all work product completed prior to that payment. This section shall apply whether the CONSULTANT's services are satisfied by the completion of the Agreement or are terminated in accordance with other provisions of this Agreement. Notwithstanding any other provision of this section or Agreement, the CONSULTANT shall have the right to make copies of all such plans, studies, sketches, drawings, computer printouts and disk files, and specifications.

B. CONSULTANT shall not be responsible for damage caused by subsequent changes to or uses of the deliverables where the subsequent changes or uses are not authorized or approved by CONSULTANT, provided that the service rendered by CONSULTANT was not a proximate cause of the damage.

C. Copies of Work Product

Upon completion of the work required for each Task Order, the CONSULTANT shall deliver to OC San the number of copies specified in the specific Task Order scope of work of the final report containing the CONSULTANT's findings, conclusions, recommendations, and all supporting documentation and/or final design drawings and specifications. Each Task Order will define the requirements for the deliverables.

SECTION 8. INSURANCE

A. General:

- i. Insurance shall be issued and underwritten by insurance companies acceptable to OC San.
- ii. Insurers must have an "A-" Policyholder's Rating, or better, and Financial Rating of at least Class VIII, or better, in accordance with the most current A.M. Best's Guide Rating. However, OC San will accept State Compensation Insurance Fund for the required policy of Worker's Compensation Insurance subject to OC San's option to require a change in insurer in the event the State Fund financial rating is decreased below "B". Further, OC San will require CONSULTANT to substitute any insurer whose rating drops below the levels herein specified. Said substitution shall occur within twenty (20) days of written notice to CONSULTANT by OC San or its agent.
- iii. Coverage shall be in effect prior to the commencement of any work under this Agreement.

B. General Liability:

The CONSULTANT shall maintain during the life of this Agreement, including the period of warranty, Commercial General Liability Insurance written on an occurrence basis providing the following minimum limits of liability coverage: Two Million Dollars (\$2,000,000) per occurrence with Four Million Dollars (\$4,000,000) aggregate. If aggregate limits apply separately to this Agreement (as evidenced by submission of ISO form CG 25 03 or CG 25 04), then the aggregate limit may be equivalent to the per occurrence limit. Said insurance shall include coverage for the following hazards: Premises-Operations, blanket contractual liability (for this Agreement), products liability/completed operations (including any product manufactured or assembled), broad form property damage, blanket contractual liability, independent contractors liability, personal and advertising injury, mobile equipment, owners and contractors protective liability, and cross liability and severability of interest clauses. A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement(s). If requested by OC San and applicable, XCU coverage (Explosion, Collapse and Underground) and Riggers/On Hook Liability must be included in the General Liability policy and coverage must be reflected on the submitted Certificate of Insurance.

C. Umbrella Excess Liability:

The minimum limits of general liability and automobile liability insurance required, as set forth herein, shall be provided for through either a single policy of primary insurance or a combination of policies of primary and umbrella excess coverage. Umbrella excess liability coverage shall be issued with limits of liability which, when combined with the primary insurance, will equal the minimum limits for general liability and automobile liability.

D. Automobile/Vehicle Liability Insurance:

The CONSULTANT shall maintain a policy of automobile liability insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and

other vehicles providing the following minimum limit of liability coverage: combined single limit of One Million Dollars (\$1,000,000). A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement.

E. Drone Liability Insurance:

If a drone will be used, drone liability insurance must be maintained by the CONSULTANT in the amount of One Million Dollars (\$1,000,000) in a form acceptable to OC San.

F. Worker's Compensation Insurance:

The CONSULTANT shall provide such Workers' Compensation Insurance as required by the Labor Code of the State of California in the amount of the statutory limit, including Employer's Liability Insurance with a minimum limit of One Million Dollars (\$1,000,000) per occurrence. Such Worker's Compensation Insurance shall be endorsed to provide for a waiver of subrogation in favor of OC San. A statement on an insurance certificate will not be accepted in lieu of the actual endorsements unless the insurance carrier is the State of California Insurance Fund and the identifier "SCIF" and applicable endorsements are referenced on the certificate of insurance. If an exposure to Jones Act liability may exist, the insurance required herein shall include coverage for Jones Act claims.

G. Errors and Omissions/Professional Liability:

The CONSULTANT shall maintain in full force and effect, throughout the term of this Agreement, standard industry form professional liability/errors and omissions insurance coverage with coverage limits of not less than Two Million Dollars (\$2,000,000) in accordance with the provisions of this paragraph. If the policy of insurance is written on a "claims made" basis, said policy shall be continued in full force and effect at all times during the term of this Agreement and for a period of five (5) years from the date of the completion of the services hereunder.

In the event of termination of said policy during this period, the CONSULTANT shall obtain continuing insurance coverage for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement. Said coverage shall be evidenced by either a new policy evidencing no gap in coverage or by separate extended "tail" coverage with the present or new carrier.

In the event the present policy of insurance is written on an "occurrence" basis, said policy shall be continued in full force and effect during the term of this Agreement or until completion of the services provided for in this Agreement, whichever is later. In the event of termination of said policy during this period, new coverage shall be obtained for the required period to insure for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement.

The CONSULTANT shall provide to OC San a certificate of insurance in a form acceptable to OC San indicating the deductible or self-retention amounts and the expiration date of said policy and shall provide renewal certificates not less than ten (10) days prior to the expiration of each policy term.

H. Proof of Coverage:

The CONSULTANT shall furnish OC San with original certificates and amendatory endorsements effecting coverage. Said policies and endorsements shall conform to the requirements herein stated. All certificates and endorsements must be received and accepted by OC San before work commences. OC San reserves the right to require, at any time, complete, certified copies of all required insurance policies, including endorsements, effecting the coverage required. The following are approved forms that must be submitted as proof of coverage:

- | | |
|--|--|
| • Certificate of Insurance | ACORD Form 25 or other equivalent Certificate of Insurance form |
| • Additional Insurance (General Liability) | The combination of (ISO Forms) CG 2010 <u>and</u> CG 2037 |
| | All other additional insured endorsements must be submitted for approval by OC San and OC San may reject alternatives that provide different or less coverage to OC San. |
| • Additional Insured (Auto Liability) | Submit Endorsement provided by carrier for OC San's approval. |
| • Waiver of Subrogation | Submit workers' compensation waiver of subrogation endorsement provided by carrier for OC San's approval. |
| • Cancellation Notice | No endorsement is required. However, Vendor/Contractor is responsible for notifying OC San of any pending or actual insurance policy cancellation, as described in Article I. Cancellation and Policy Change Notice below. |

I. Cancellation and Policy Change Notice:

The CONSULTANT is required to notify OC San in writing of any insurance cancellation notice it receives or other knowledge of pending or actual insurance policy cancellation, within two (2) working days of receipt of such notice or acquisition of such knowledge. Additionally, the CONSULTANT is required to notify OC San in writing of any change in the terms of insurance, including reduction in coverage or increase in deductible/SIR, within two (2) working days of receipt of such notice or knowledge of same.

Said notices shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Contracts, Purchasing & Materials Management Division

J. Primary Insurance:

All liability policies shall contain a Primary and Non-Contributory Clause. Any other insurance maintained by OC San shall be excess and not contributing with the insurance provided by the CONSULTANT.

K. Separation of Insured:

All liability policies shall contain a "Separation of Insureds" clause.

L. Non-Limiting (if applicable):

Nothing in this document shall be construed as limiting in any way, nor shall it limit the indemnification provision contained in this Agreement or the extent to which the CONSULTANT may be held responsible for payment of damages to persons or property.

M. Deductibles and Self-Insured Retentions:

Any deductible and/or self-insured retention must be declared to OC San on the Certificate of Insurance. All deductibles and/or self-insured retentions require acceptance by OC San. At the option of OC San, either: a) the insurer shall reduce or eliminate such deductible or self-insured retention as respects OC San or b) the CONSULTANT shall provide a financial guarantee satisfactory to OC San guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

N. Defense Costs:

Liability policies shall have a provision that defense costs for all insureds and additional insureds are paid in addition to and do not deplete any policy limits.

O. Subconsultants/Subcontractors:

The CONSULTANT shall be responsible to establish insurance requirements for Subconsultants/Subcontractors hired by the CONSULTANT. The insurance shall be in amounts and types reasonably sufficient to deal with the risk of loss involving the Subconsultants'/Subcontractors' operations and work.

P. Limits Are Minimums:

If the CONSULTANT maintains higher limits than any minimums shown above, then OC San requires and shall be entitled to coverage for the higher limits maintained by the CONSULTANT.

SECTION 9. PROJECT TEAM AND SUBCONSULTANTS

CONSULTANT shall provide to OC San, prior to execution of a Task Order, the names and full descriptions of all Subconsultants/Subcontractors and CONSULTANT's project team members anticipated to be used in performing work under a Task Order. In its proposal, CONSULTANT shall include a description of the work and services to be performed by

each Subconsultant/Subcontractor and each of CONSULTANT's project team members. CONSULTANT shall include the respective compensation amounts for CONSULTANT and each Subconsultant/Subcontractor broken down as indicated in Section 4 – COMPENSATION, above.

There shall be no substitution of the listed Subconsultants/Subcontractors and CONSULTANT's project team members without prior written approval by OC San.

SECTION 10. ENGINEERING REGISTRATION

The CONSULTANT's personnel and its Subconsultants/Subcontractors shall be comprised of registered engineers and a staff of specialists and draftsmen in each department. The firm itself is not a registered engineer but represents and agrees that when the performance of this Agreement requires the services of a registered engineer, such services hereunder will be performed under the direct supervision of registered engineers who are registered in the State of California.

SECTION 11. AUDIT PROVISIONS

- A. OC San retains the reasonable right to access, review, examine, and audit any and all books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify that the CONSULTANT is in compliance with all the requirements under this Agreement. The CONSULTANT shall include OC San's right as described above in any and all of their subcontracts and shall ensure that these rights are binding upon all its Subconsultants/Subcontractors.
- B. OC San retains the right to examine CONSULTANT's books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify all direct and indirect costs, of whatever nature, which are claimed to have been incurred, or anticipated to be incurred, or to ensure CONSULTANT's compliance with all the requirements under this Agreement during the term of this Agreement and for a period of three (3) years after expiration or earlier termination of the Agreement.
- C. The CONSULTANT shall maintain complete and accurate records in accordance with generally accepted industry standard practices and OC San's policy. The CONSULTANT shall make available to OC San for review and audit all project-related accounting records and documents and any other financial data within fifteen (15) days after receipt of notice from OC San. Upon OC San's request, the CONSULTANT shall submit exact duplicates of originals of all requested records to OC San. If an audit is performed, the CONSULTANT shall ensure that a qualified employee of the CONSULTANT will be available to assist OC San's auditor in obtaining all project related accounting records and documents and any other financial data.

SECTION 12. LEGAL RELATIONSHIP BETWEEN PARTIES

The legal relationship between the Parties is that of an independent contractor and nothing herein shall be deemed to transform the CONSULTANT, its staff, independent contractors, or its Subconsultants/Subcontractors, into agents or employees of OC San and shall obtain no rights to any benefits which accrue to OC San's employees. CONSULTANT's staff performing services under the Agreement shall at all times be employees and/or independent contractors of the CONSULTANT. The CONSULTANT shall monitor and control its staff and

wages, salaries, and other amounts due directly to its staff in connection with the Agreement. The CONSULTANT shall be responsible for hiring, review, and termination of its staff and shall be accountable for all reports and obligations respecting them, such as social security, income tax withholding, unemployment compensation, workers' compensation insurance, and similar matters.

SECTION 13. NOTICES

All notices hereunder and communications regarding the interpretation of the terms of this Agreement, or changes thereto, shall be effected by delivery of said notices in person or by depositing said notices in the U.S. mail, registered or certified mail, return receipt requested, postage prepaid.

Notice shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue, Fountain Valley, CA 92708
Attention: Ludwig Lapus, Principal Contracts Administrator
Copy: Daniel Berokoff, Engineering Supervisor

Notice shall be mailed to CONSULTANT at:

ProjectLine Technical Services, Inc.
2900 Bristol, D-103
Costa Mesa, CA 92626
Attention: Robert Getter

All communication regarding the Task Order will be addressed to the Project Manager. Direction from other OC San staff must be approved in writing by OC San's Project Manager prior to action from the CONSULTANT.

SECTION 14. TERMINATION

OC San may terminate this Agreement at any time, without cause, upon giving thirty (30) days written notice to the CONSULTANT. In the event of such termination, the CONSULTANT shall be entitled to compensation for work performed on a prorated basis through and including the effective date of termination.

The CONSULTANT shall be permitted to terminate this Agreement upon thirty (30) days written notice only if the CONSULTANT is not compensated for billed amounts in accordance with the provisions of this Agreement when the same are due. Notice of termination shall be mailed to OC San at the address listed in Section 13 – NOTICES, above.

SECTION 15. COMPLIANCE

The CONSULTANT certifies by the execution of this Agreement that it pays employees not less than the minimum wage as defined by law and that it does not discriminate in its employment with regard to race, color, religion, sex, or national origin; that it is in compliance with all Federal, State, and local directives and executive orders regarding non-discrimination in employment; and that it agrees to demonstrate positively and aggressively the principle of equal opportunity in employment.

The CONSULTANT shall comply with all applicable laws, ordinances, codes, and regulations of Federal, State, and local government in all aspects related to this Agreement and any work completed for OC San.

SECTION 16. AGREEMENT EXECUTION AUTHORIZATION

Both OC San and the CONSULTANT do covenant that each individual executing this document by and on behalf of each Party is a person duly authorized to execute this Agreement for that Party.

SECTION 17. DISPUTE RESOLUTION

In the event of a dispute arising between the Parties regarding performance or interpretation of this Agreement, the dispute shall be resolved by binding arbitration under the auspices of the Judicial Arbitration and Mediation Service ("JAMS"), or similar organization or entity conducting alternate dispute resolution services.

SECTION 18. ATTORNEY'S FEES, COSTS, AND NECESSARY DISBURSEMENTS

If any action at law or inequity or if any proceeding in the form of an Alternative Dispute Resolution is necessary to enforce or interpret the terms of this Agreement, the prevailing Party shall be entitled to reasonable attorney's fees, costs and necessary disbursements in addition to any other relief to which it may be entitled.

SECTION 19. WARRANTY

CONSULTANT shall perform its services in accordance with generally accepted industry and professional standards. If, within the 12-month period following completion of its services, OC San informs the CONSULTANT that any part of the services fails to meet those standards, the CONSULTANT shall, within the time prescribed by OC San, take all such actions as are necessary to correct or complete the noted deficiency(ies).

SECTION 20. INDEMNIFICATION

To the fullest extent permitted by law, the CONSULTANT shall indemnify, defend (at the CONSULTANT's sole cost and expense and with legal counsel approved by OC San, which approval shall not be unreasonably withheld), protect and hold harmless OC San and all of OC San's officers, directors, employees, consultants, and agents (collectively the "Indemnified Parties"), from and against any and all claims, damages, liabilities, causes of action, suits, arbitration awards, losses, judgments, fines, penalties, costs, and expenses (including, without limitation, attorneys' fees, disbursements and court costs, and all other professional, expert, or CONSULTANT's fees and costs, and OC San's general and administrative expenses) individually, a "Claim" and collectively, "Claims", which may arise from or are in any manner related, directly or indirectly, to any work performed or any operations, activities, or services provided by the CONSULTANT in carrying out its obligations under this Agreement to the extent of the negligent, recklessness, and/or willful misconduct of the CONSULTANT, its principals, officers, agents, employees, CONSULTANT's suppliers, Subconsultants, Subcontractors, and/or anyone employed

directly or indirectly by any of them, regardless of any contributing negligence or strict liability of an Indemnified Party. Notwithstanding the foregoing, nothing herein shall be construed to require the CONSULTANT to indemnify the Indemnified Parties from any Claim arising solely from:

- (A) the active negligence or willful misconduct of the Indemnified Parties; or
- (B) a natural disaster or other act of God, such as an earthquake; or
- (C) the independent action of a third party who is neither one of the Indemnified Parties nor the CONSULTANT, nor its principal, officer, agent, employee, nor the CONSULTANT's supplier, Subconsultant, Subcontractor, nor anyone employed directly or indirectly by any of them.

Exceptions (A) through (B) above shall not apply, and the CONSULTANT shall, to the fullest extent permitted by law, indemnify the Indemnified Parties from Claims arising from more than one cause if any such cause taken alone would otherwise result in the obligation to indemnify hereunder.

The CONSULTANT's liability for indemnification hereunder is in addition to any liability the CONSULTANT may have to OC San for a breach by the CONSULTANT of any of the provisions of this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit the CONSULTANT's indemnification obligation or other liability hereunder. The terms of this Agreement are contractual and the result of negotiation between the Parties. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code section 1654) that ambiguities are to be construed against the drafting Party shall not be employed in the interpretation of this Agreement.

SECTION 21. DUTY TO DEFEND

The duty to defend hereunder is wholly independent of and separate from the duty to indemnify and such duty to defend shall exist regardless of any ultimate liability of the CONSULTANT and shall be consistent with Civil Code section 2782.8. Such defense obligation shall arise immediately upon presentation of a Claim by any person if, without regard to the merit of the Claim, such Claim could potentially result in an obligation to indemnify one or more Indemnified Parties and upon written notice of such Claim being provided to the CONSULTANT. Payment to the CONSULTANT by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition precedent to enforcing such Indemnified Party's rights to indemnification hereunder. In the event a final judgment, arbitration, award, order, settlement, or other final resolution expressly determines that the Claim did not arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONSULTANT, to any extent, then OC San will reimburse the CONSULTANT for the reasonable costs of defending the Indemnified Parties against such Claims.

The CONSULTANT's indemnification obligation hereunder shall survive the expiration or earlier termination of this Agreement until such time as action against the Indemnified Parties for such matter indemnified hereunder is fully and finally barred by the applicable statute of limitations.

SECTION 22. COMPLIANCE WITH OC SAN POLICIES AND PROCEDURES

The CONSULTANT shall be required to comply with all OC San policies and procedures. OC San requires the CONSULTANT and its Subconsultants/Subcontractors to follow and ensure their employees follow all Federal, State, and local regulations as well as OC San's safety standards while working at OC San locations. If during the course of the contract it is discovered that OC San's safety standards do not comply with Federal, State, or local regulations, then the CONSULTANT is required to follow the most stringent regulatory requirement at no additional cost to OC San. The CONSULTANT and all of its employees and Subconsultants/Subcontractors shall adhere to all applicable Contractor Safety Standards attached hereto as Attachment "L".

SECTION 23. GOVERNING LAW

This Agreement shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in Orange County in the event any action is brought in connection with this Agreement or the performance thereof.

SECTION 24. TIME OF ESSENCE

Time is of the essence in the performance of this Agreement.

SECTION 25. CONFLICT OF INTEREST

The CONSULTANT covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of the services contemplated by this Agreement. No person having such interest shall be employed by or associated with the CONSULTANT.

SECTION 26. ENTIRE AGREEMENT

This Agreement constitutes the entire understanding and agreement between the Parties and supersedes all previous negotiations between them pertaining to the subject matter hereof.

[THIS SECTION INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, this Agreement has been executed in the name of OC San and the CONSULTANT by their respective duly authorized officers, as of the date first written above.

PROJECTLINE TECHNICAL SERVICES, INC.

By _____ Date _____

Printed Name & Title

ORANGE COUNTY SANITATION DISTRICT

By _____ Date _____
Chad P. Wanke
Board Chairman

By _____ Date _____
Kelly A. Lore
Clerk of the Board

By _____ Date _____
Ruth Zintzun
Finance & Procurement Manager

Attachments: Attachment "A" Sample Scope of Work
Attachment "B" Not Used
Attachment "C" Not Used
Attachment "D" Allowable Direct Costs
Attachment "E" Rates Proposal
Attachment "F" Not Used
Attachment "G" Not Used
Attachment "H" Not Used
Attachment "I" Not Used
Attachment "J" Not Used
Attachment "K" Not Used
Attachment "L" Contractor Safety Standards
Attachment "M" Iran Contracting Act Verification

ATTACHMENT “A”

SAMPLE SCOPE OF WORK

ATTACHMENT "A"

SAMPLE SCOPE OF WORK DESCRIPTION

OC SAN staff will develop detailed scope of work to be included in each Request for Task Order Proposal (RFTOP). The RFTOP will require Consultants to base their proposals on the scope of work included in the RFTOP. The remainder of this document are the templates typically used for design projects. Notes to scope editor are shown, although they will be removed before a scope of work is included in a RFTOP. Yellow highlighted text indicates where project specific information or a hypothetical example is given.

Design Task Order

Attachment A - Scope of Work

1 PROJECT REQUIREMENTS

Provide professional design engineering services for the project described herein.

1.1 BACKGROUND

- A. The Secondary Clarifiers at Plant No. 1 were constructed under Project Nos. P1-16 (1973), P1-36-2 (1995), and P1-82 (2005). A buried ductile iron plant water line around the secondary clarifiers feeds the scum sprayers and hose bibs. Because the plant water chemical composition is so corrosive to ductile iron, many failures have occurred.

1.2 GENERAL PROJECT DESCRIPTION

- A. This project includes the replacement of approximately 1800 feet of existing 6-inch ductile iron buried plant water piping, valves, fittings, and connections.
- B. A location map is provided in **Figure 1**.

[insert location map]

Figure 1 - Project Location Map

1.3 PROJECT ELEMENTS

- A. **Element 1: Piping** – Replace the existing 1,800 feet of 6-inch buried ductile iron plant water piping with new 6-inch plant water piping.
- B. Assumptions for level of effort:
1. 1,600 feet of piping shall be below grade and 200 feet shall be either above or below grade.
 - a. 1,600 feet of piping is located around the Secondary Clarifiers. Assume high-density polyethylene (HDPE) as the pipe material with appropriate dimension ratio value.
 - b. 200 feet of piping will re-route the existing plant water line on the northwest end of the Secondary Clarifiers. Recent projects disconnected the existing plant water line at various locations resulting in an incomplete loop. This piping will reconnect the lines to allow for a complete loop. See Exhibit 13.1 for photos and Exhibit 13.3 for proposed routing design.
 - (1) For above grade pipe material, assume cement-lined ductile iron or fiberglass-reinforced plastic.
 2. Follow existing alignment with new pipe. New alignments shall be kept as close to the existing alignment as feasible.
 - a. The Secondary Effluent Junction Box No. 4 (SEJB-4), located at the southwest corner of the Secondary Clarifiers, is congested with various utilities, such as plant water, secondary effluent, and reclaimed water lines, and associated valves. Follow the existing alignment in this important area.
 - b. Concrete encasement of HDPE, located on the west side of the Secondary Clarifiers on Fuentes Road, was installed under project P1-102 (2006). Assume potholing is necessary to survey the edge of the concrete and confirm the limits of the existing concrete encasement

do not interfere with this project. As much as possible, the new alignment shall avoid the concrete encasement.

1.4 PROJECT SCHEDULE

- A. **Table 1** lists major project deliverables along with Orange County Sanitation District's (OC SAN) review and approval periods. CONSULTANT shall comply with the deadlines indicated in that table. OC SAN will consider an alternative CONSULTANT proposed schedule provided it is consistent with OC SAN resources, schedule constraints, and adds value. The negotiated durations will set the design baseline schedule.

Table 1 – Project Milestones and Deadlines

MILESTONE	DEADLINE
Kickoff Meeting	The kickoff meeting will be scheduled to coincide with the Project Notice to Proceed (NTP).
Preliminary Design Memo (PDM)	[XX] workdays from Preliminary Design Phase NTP.
OC SAN Review of PDM	10 workdays from receipt of PDM.
Submit Design Submittal 3 (DS3)	[YY] workdays from approval of PDM.
OC SAN Review of DS3	15 workdays from receipt of DS3.
Submit Final Design Submittal (FDS)	15 workdays from receipt of OC SAN comments on DS3.
OC SAN Review of FDS	10 workdays from receipt of FDS.
Submit Final Technical Plans and Specifications (FTPS)	15 workdays from receipt of OC SAN comments on FDS.
Total	[ZZZ] workdays

1.5 PROJECT MANAGEMENT

- A. CONSULTANT shall be responsible for managing CONSULTANT's project execution, schedule, budget, subconsultants, and coordination with other projects.
- B. Per **Exhibit 18**, PMWeb will be used for the management of this agreement.
- C. [Monthly Progress Report: Submit monthly progress reports at the same time as monthly invoices that include the following contents:
1. Work activities completed to date, in the current reporting period, and projected for the coming month.
 2. A brief description of outstanding issues and potential cost, schedule, quality impacts.
 3. Potential changes in the project scope or design scope.
 4. Any corrective actions needed to avoid potential impacts.
 5. Budget status: actual costs to date, costs to complete, and costs at completion.
 6. Schedule status: variances between scheduled and forecasted milestone dates.]
- D. Monthly Invoices: Provide a monthly cost report and/or invoices, which shall document the man-hours and billing rate for each person that works on the project, and shall include the following:
1. Budget
 2. Current billing period invoicing
 3. Previous billing period "total invoiced to date"
 4. Budget Amount Remaining
 5. Current billing period "total percent invoiced to date"

1.6 QUALITY CONTROL

- A. Provide Quality Assurance and Quality Control of the work.
- B. Provide documentation upon request that the CONSULTANT has performed a quality control review in-house, and all the comments have been addressed prior to providing any submittals to OC SAN.

1.7 PROJECT MEETINGS

- A. CONSULTANT shall communicate throughout the project to keep OC SAN apprised of the job, review work-in-progress, share information, discuss project submittals, present findings of technical analyses, receive and resolve comments, and obtain decisions and direction by OC SAN staff.
 - 1. **Table 2** below lists the anticipated meetings and site visits. Microsoft Teams shall be used for meetings. CONSULTANT will provide an agenda 2 workdays prior to each meeting. Meeting minutes will be submitted to the OC SAN project manager for review within 3 workdays of the meeting.

Table 2 – Project Assumed Meetings and Site Visits

DESIGN ACTIVITY	MEETINGS	SITE VISITS
Kickoff Meeting	1 (1-hour)	
PDM	Progress meeting (1-hour, every 2 weeks)	8 hours
PDM Workshop	2 (1-hour)	
DS3	Progress meeting (1-hour, every 2 weeks)	8 hours
DS3 Workshop	2 (1-hour)	
FDS	Progress meeting (1-hour, weekly)	
FDS Workshop	1 (1-hour)	
FTPS	Progress meeting (1-hour, weekly)	
Construction Services	6 hours	24 hours
Closeout	4 hours	12 hours

1.8 SUBMITTAL REVIEWS

- A. Deliverables (other than specifications) shall be submitted in searchable PDF format with no hard copy. Deliverables shall be bookmarked and hyperlinked for navigation per **Exhibit 14**.
- B. OC SAN has standardized on the use of Bluebeam Revu for reviewing and providing comments to PDF files. The purpose of the studio session is to provide review and collaboration. OC SAN staff will create the Bluebeam studio session, invite attendees, configure, and manage the studio session. Make drawing submittals in Bluebeam and respond to OC SAN comments in Bluebeam per **Exhibit 15**.

1.9 SPECIFICATIONS

- A. Prior to preparing or editing specifications, CONSULTANT shall meet with OC SAN staff to determine which OC SAN and CONSULTANT provided specifications should be included in the design. After discussions, all specifications should be loaded in Microsoft Teams (Teams) early in design and prior to editing for DS3.
- B. Tailor all specifications to project and remove requirements that do not apply.
- C. Unless a CONSULTANT is using their own specification management software, Specifications should remain in Teams for editing throughout design. Make all edits to specifications hosted in Teams. Unless agreed to, Specifications should not be removed from Teams or edited elsewhere.
- D. Provide specifications as Microsoft Word (Word) files with Track Changes enabled throughout design.

- E. OC SAN staff will review specifications during submittal review periods. CONSULTANT shall respond to OC SAN comments using Word “Reply” and “Resolve.” CONSULTANT shall “Reply” to each OC SAN comment describing how the comment will be addressed and revise the specification, as needed, to address the comment. “Resolve” will be used by the reviewer or designee to confirm their comment has been addressed. For more information see **Exhibit 16**.
- F. Prior to advertisement, all Word comments and revisions shall be Track Changes accepted, rejected, resolved, or deleted by OC SAN staff prior to bid.

2 PRELIMINARY DESIGN

All significant material and equipment decisions are to be made before the start of Design. At the end Preliminary Design, major design elements shall be fixed, and major equipment, footprints, and utility connection locations shall be well established. The extent of the design and the number and type of drawings shall also be established.

2.1 PRELIMINARY DESIGN AND PDM

- A. The PDM shall consist of a PowerPoint presentation. Present PDM findings and recommendations to OC SAN in a stakeholder meeting using the PowerPoint presentation mentioned in this section for consensus before the start of Design.
- B. Identify any equipment that has one competitive supplier (i.e., sole source). In those cases, recommend an appropriate procurement strategy compatible with California Law and OC SAN policies.
- C. Develop 2 conceptual design alternatives for the plant water piping alignment.
 - 1. Alternatives:
 - a. Reuse exiting alignment and existing points of connection
 - b. Alternate alignment along tunnels in and around secondary clarifiers
 - 2. Perform the following with each alternative:
 - a. Cost, benefit, and life cycle analysis.
 - b. Identify plant water construction shutdown requirements with estimated durations.
 - c. Identify construction access requirements and limitations.
 - d. Prepare preliminary drawings (sketches).
 - 3. Discuss the available alternatives with OC SAN. The PDM shall include the recommendation alternative.
- D. Prepare drawings showing:
 - 1. Proposed alignment of piping
 - 2. Proposed piping materials and quantities
 - 3. Proposed quantity and type of valves and valve cans
 - 4. Proposed connection points which include the following:
 - a. New replacement pipes connecting to existing main plant water line
 - b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
 - 5. Demolition of existing ductile iron pipes and valves
 - 6. Proposed design of new valves and valve cans
 - 7. Proposed design of connection points
 - a. New replacement pipes connecting to existing main plant water lines

- b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
- 8. Proposed design of pipe supports by typical detail and max spacing table
- E. Summarize key constructability and construction sequencing constraints.
 - 1. Develop process flow schematic of the components of the plant water system at Plant No. 1 that impact the pipelines being replaced.
- F. Prepare preliminary construction schedule.
- G. Prepare P&IDs: Fully detailed for each design "module", e.g., 1 pump set typical of all with proposed tagging strategy.
- H. Perform any potholing activities required for the concrete encasement survey specified under Element 1.
- I. Quantify soil contamination by determining the volume of excavation work needed to perform the Work. Coordinate with OC SAN ENGINEER to determine the area of excavation. Soil testing is not necessary.
- J. Develop testing requirements. Assume:
 - 1. Pressure leak and valve testing shall be included.
 - 2. Plant water operating pressure is 110 PSI.

2.2 PRELIMINARY DESIGN CONSTRUCTION COST ESTIMATE

- A. Prepare an AACE International Class 3 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01. Data used to prepare the cost estimate shall be included as an attachment to the PDM.
 - 1. Determine project specific and appropriate values to use for the percentages for profit, bond, and insurance.
 - 2. Costs for project level allowance, insurance, profit, and bond shall be cumulative and listed as individual line items.
 - 3. Allowances or mark ups should be well explained and itemized.
 - a. Include "Market Volatility" allowance of xx%.(revise based on the market conditions)
 - b. Do not setup allowance for change orders.
 - c. Do not escalate to midpoint of construction - this is by OC SAN.
 - 4. Specialty work should be recently (under 6 months) estimated by vendor.
 - a. For example, sewer bypassing services should be estimated by vendor (i.e., Rain 4 Rent).
 - b. Provide vendor quotes for high-cost equipment.
 - c. Minor equipment costs may be documented by written telephone quotations.
 - 5. Provide breakdown of lump sum costs.
 - 6. Show labor rates so they can be checked.
 - 7. Provide all back back up for all documentation obtained for the cost estimate purposes. The cost estimate back up shall have the date and the vendor name/contact name. If catalog price is used, provide the year of that publication.
- B. Prepare estimate of construction duration. The suggested construction duration shall take in considerations the verifiable lead time for all equipment.

3 DESIGN

Prepare biddable plans, technical specifications, other Bid Documents, and any associated design calculations, required to complete the Project Elements.

3.1 DS3 DELIVERABLES

- A. Meet at a 50% completion level with OC SAN staff to review design progress. Formal deliverables are not necessary. QA/QC is also not required for this preview.
- B. At this submittal, the design is essentially finished and submitted as complete. DS3 shall include all finished and checked plans and specifications. OC SAN staff will review DS3 and provide comments to the drawings and specifications. The CONSULTANT should be finished with no remaining design work except for OC SAN comments provided at DS3 review and their incorporation at FDS.
- C. [Prepare construction drawings in CAD conforming to OC SAN's CAD Manual. A CAD compliance check will be performed at DS3 (Exhibit 17, Chapter 8 explains the CAD compliance check, and Appendix D contains the "CAD Standards Compliance Checklist" summarizing all items checked by OC SAN). OC SAN will provide base layers and utilities for Work locations within the treatment plant boundaries.]

3.2 DS3 COST ESTIMATE

- A. Prepare an AACE International Class 2 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01 based on the DS3 design. Data used to prepare the cost estimate shall be included as an attachment to DS3.
- B. Prepare estimate of construction duration.

3.3 FDS DELIVERABLES

- A. Final Design Submittal (FDS) is for OC SAN to confirm all comments from DS3 have been addressed and incorporated and add any additional comments.

3.4 FTSP DOCUMENTS

- A. Final Technical Plans and Specifications is for the CONSULTANT to address and incorporate all comments and provide all necessary stamps and signatures for a complete bid package suitable for advertisement by OC SAN.

3.5 CONSTRUCTION COST ESTIMATE "ENGINEER'S ESTIMATE"

- A. 30 calendar days prior to advertisement, refresh the DS3 Class 2 cost estimate. Get updated vendor quotes used to prepare the DS3 cost estimate. This will become the Engineer's Estimate published in the front-end documents.

3.6 PERMITTING ASSISTANCE ([ALLOCATE 60 HOURS] [NOT INCLUDED IN THIS AGREEMENT])

- A. [For all applicable Project Elements of this Scope of Work, provide Bid Documents that ensure that the design complies with all conditions of existing permits and permits required to construct and implement this project. Testing, construction drawings, specifications, and supplemental drawings shall be prepared, as necessary, in the format required to obtain all permits.]
- B. Assist OC SAN in obtaining permits. This assistance shall include identifying applicable permits, completing required design, plan preparation, application forms provided by OC SAN, preparing supporting documentation for the permit applications as required by the issuing agency, furnishing the required number of copies of all construction drawings and exhibits, and attend meetings with permitting agencies at the request of OC SAN.
- C. Except for construction contractor-furnished permits, OC SAN staff will execute all applications. CONSULTANT shall determine the cost and requirements of all permits. All permit fees will be paid directly by OC SAN and will not be part of CONSULTANT's fee.
- D. Submit all supporting documentation in a timely fashion for all permits required for this project as described below.
 - 1. Caltrans Encroachment Permits

- a. Determine if encroachment permits or other types of permits are required by Caltrans for the design and construction phases. Provide the work necessary to obtain such permits including coordinating and attending meetings.

2. City/County Encroachment Permits

- a. Provide coordination, work effort, and attend meetings, as required, to obtain encroachment permits from each city and agency who has jurisdiction. Process the plans through the cities and agencies for approval, revise plans, and meet with them, as required, to obtain approval.]

3.7 BID SUPPORT SERVICES

- A. Provide answers to bidder's questions related to the design. Provide revisions to specifications and drawings when needed for addendum.
- B. Within 2 weeks of the bid opening date, prepare conformed document set (drawings, databases, specification, and other required materials) that incorporates the addenda. See requirements of OC SAN's CAD Manual.

3.8 POPULATE PMWEB LIST OF SUBMITTALS (ALLOCATE 24 HOURS)

- A. PMWeb is used to manage communication with the contractor. OC SAN uses an Excel template to populate the list of all submittals. The CONSULTANT shall review each project specification and complete the Submittal Items Template as follows:
 1. Enter the list of project specifications.
 2. Enter the list of commissioning packages. Commissioning packages are defined by Section 01810, Commissioning.
 3. Enter the following information for each submittal item.
 - a. Specification section: enter the specification section requiring the submittal.
 - b. Submittal Item description: enter the description of the submittal. Submittal items that refer to multiple specifications shall include referenced specification sections in brackets.
 - c. Comments: enter notes, comments, or clarifications. This field is optional.
 - d. Commissioning package: enter the commissioning package of the submittal item. Submittal items shall be duplicated when the same submittal is required for multiple commissioning packages. Items shall be separated into mobilization, general construction, or a commissioning package defined by the project specifications.
 - e. Phase: Identify which phase each submittal is required to be approved.
 - f. Retention: Specify if the submittal is a Project File or Facility Record based on OC SAN's Records Retention Policy.
 - g. Lead time: Specify the appropriate number of workdays that OC SAN has to review the particular submittal.
 - h. Load: Specify if the submittal should be loaded into PMWeb prior to NTP, upon contractor approval, or prior to the start of commissioning.
- B. OC SAN will provide a PMWeb Master Submittal Items template that includes the submittals required by OC SAN's Master Specifications. The CONSULTANT shall not deviate from the Master PMWeb Submittal Items, except as required by the project specific specifications. The CONSULTANT shall develop submittal items for specifications that are not part of OC SAN's Master Specifications.
- C. OC SAN will provide a 1-hour virtual training on the use of the PMWeb Master Submittal Items Template.
- D. The CONSULTANT shall populate, receive comments, address comments, and provide completed submittal form as follows:
 1. 20 workdays after advertisement date.

3.9 SAFETY AND RISK MEETING

- A. Ensure that an OC San Risk Management safety and security professional has been assigned to the project.
- B. CONSULTANT shall prepare and meet with OC San Risk Management personnel at all design stages to review Exhibit 11 Sample Full Project Safety Review Plan and Exhibit 12 Sample Risk Management Check List. This shall be completed in accordance with Exhibit 4 Risk Management Requirements.
- C. CONSULTANT shall update Exhibits 11 and 12 throughout the design phases. CONSULTANT shall provide OC San Risk Management with the final copies of Exhibit 11 and Exhibit 12 at completion of the Design Project.

4 CONSTRUCTION SERVICES

OC SAN will administer and provide field inspection for construction contracts. Construction and installation support services shall be provided by the CONSULTANT on an as-needed basis and as requested by OC SAN. The services are indicated below.

4.1 SUBMITTAL REVIEWS (ALLOCATE 15 HOURS)

- A. OC SAN will manage submittal review. The CONSULTANT shall use PMWeb to review and return comments to OC SAN. Return comments within 5 workdays.

4.2 REQUESTS FOR INFORMATION (RFIS) (ALLOCATE 15 HOURS)

- A. OC SAN will manage the processing of RFI's. When requested by OC SAN, CONSULTANT shall return written responses to OC SAN within 5 workdays of receipt of RFI using PMWeb. Generate necessary sketches, figures, and modifications to the drawings for clarifications.

4.3 PROGRESS MEETINGS AND SITE VISITS

- A. Refer to **Table 2**.

4.4 RECORD DRAWINGS

- A. Verify that the Contractor's As-Built set correctly reflects the information included in the approved shop drawings, RFIs, approved Field Change Orders, plan clarifications, plan changes, and other deviations from the conformed drawings, and that the information in the set is complete.
- B. Draft Record Drawings shall be submitted to OC SAN within 4 weeks of receipt from OC SAN of the approved Contractor's As-Built drawings. The Final Record Drawings shall be submitted within one week of receipt of OC SAN comments on the Draft Record Drawings.
- C. Prepare Draft Record Drawings based on the Final Field Markup Set for all drawings in accordance with the requirements in the CAD Manual. Submit the Draft Record Drawings to the OC SAN Resident Engineer. The Draft Record Drawings will be reviewed for content and CAD compliance by OC SAN staff. If no comments are identified, CONSULTANT shall prepare the Final Record Drawings and submit them along with the Contractor's field markup set to the Project Manager. For content and placement of record drawing stamp, see CAD Manual.
- D. Submit an electronic copy of the record drawings to OC SAN for review and approval. The acceptance of the record drawings shall be deemed a condition for completion of work.
- E. Contractor-generated drawings described in the Design Guidelines and the shop drawings will not be updated by CONSULTANT. The format and quantities for delivery of the submittals shall be listed below:

Contents	Draft Record Drawings	Final Record Drawings
All related electronic files, including CAD and compiled PDFs.	One copy to be uploaded to Microsoft Teams.	One copy to be uploaded to Microsoft Teams.

4.5 EQUIPMENT INFORMATION DATABASE (EID) (ALLOCATE [X] HOURS [NOT INCLUDED IN THIS AGREEMENT])

- A. OC SAN uses Maximo software to manage and track asset information. When new assets are added or existing assets are modified by a project, an EID Excel spreadsheet is used to populate or update Maximo asset information. CONSULTANT shall meet with OC SAN EIM staff to request an EID spreadsheet pre-populated with the new or modified assets. OC SAN staff will provide training on how to populate the EID spreadsheet. Field work will be needed to apply equipment tags and record equipment nameplate information and serial numbers to populate the EID. Coordinate with Maintenance Specialists (David Haug or designee, Div. 870) to walk new facilities to verify accuracy of P&IDs and EID.

4.6 [UPDATE BASELINE DRAWINGS]

5 STAFF ASSISTANCE

OC SAN staff member or designee assigned to work with CONSULTANT on the design of this project is Jessica Cheung. Phone (714) 593-7147, e-mail jcheung@ocsan.gov.

6 EXHIBITS

- A. Exhibits 1-3, 5-10 – Not Used
- B. Exhibit 4 – Risk Management Requirements
- C. Exhibit 11 – Sample Full Project Safety Review Plan
- D. Exhibit 12 – Sample Risk Management Checklist
- E. Exhibit 13 – Project Reference Material
 - a. 13.1 – Photos
 - b. 13.2 – Plant 1 Plant Water System Map
 - c. 13.3 – Proposed Design Idea (The CONSULTANT may start with this conceptual design.)
 - d. 13.4 – Proposed Valve Cans (The CONSULTANT may start with this conceptual design.)
 - e. 13.5 – Record Drawings (Available Upon Request)
 - (1) P1-82, Activated Sludge Plant Rehabilitation (2005)
 - (2) P1-36-2, Secondary Treatment Improvements at Plant No. 1 (1995)
 - (3) P1-16, 46 MGD Activated Sludge Plant at Reclamation Plant No. 1 (1973)
 - (4) P1-102, Secondary Activated Sludge Facility 2 at Plant No.1 (2006)
- F. Exhibit 14 – BlueBeam Designer Training for Submission
- G. Exhibit 15 – BlueBeam Designer User Training
- H. Exhibit 16 – Spec Review using Microsoft Word and Teams
- I. Exhibit 17 – [CAD Standard Manual](#)
- J. Exhibit 18 – PMWeb

JC:tk

PROFESSIONAL DESIGN SERVICES AGREEMENT

This PROFESSIONAL DESIGN SERVICES AGREEMENT (Agreement), to be effective this 1st day of July, 2024, is made and entered into by and between:

ORANGE COUNTY SANITATION DISTRICT
hereinafter referred to as "OC San"

AND

SPEC SERVICES, INC.
hereinafter referred to as "CONSULTANT"

individually referred to as the "Party" and collectively as the "Parties".

RECITALS

WHEREAS, in accordance with Ordinance No. OC SAN-61 and pursuant to a Request for Qualifications ("Underlying RFQ"), the Board of Directors of OC San, by action on May 22, 2024, approved the award of the Agreement for **CONTRACT NO. FE24-00-14**, to CONSULTANT to provide services for selected projects on a task order (Task Order) basis from July 1, 2024 to June 30, 2027; and

WHEREAS, consistent with the Underlying RFQ, the CONSULTANT has been prequalified to perform services for the following project type: Project Type 3: Process, Electrical and Instrumentation & Control (I&C); and

WHEREAS, for Task Orders estimated to cost \$100,000 or less, the Director of Engineering, with concurrence of the Purchasing Manager, may solicit a proposal from one (1) firm on the prequalified list, which will include the project types for which the consultants are prequalified; and

WHEREAS, the CONSULTANT is qualified to provide and has agreed to provide the necessary professional engineering and related services under this Agreement; and

WHEREAS, by this Agreement, the Parties intend to set forth the general terms and conditions that will apply to any specific project for which CONSULTANT is given a Task Order by OC San.

NOW, THEREFORE, OC San and the CONSULTANT mutually agree as follows:

SECTION 1. SCOPE OF AGREEMENT

OC San, at its sole discretion, may, from time to time during the term of this Agreement, issue a Request for Task Order Proposal ("RFTOP") setting forth the detailed requirements and scope of work to be performed on the identified project and thereafter, upon receipt of a proposal from the CONSULTANT, may issue a Task Order to proceed with the work. The scope of work will be in a form attached hereto as Attachment "A" – Sample Scope of Work.

Upon execution by OC San, the Task Order shall become an operative part of this Agreement. Should any conflict or inconsistency exist in the contract documents identified in this section, the conflict or inconsistency shall be resolved by applying the provisions in the highest priority document, which shall be determined in the following order of priority:

1. Agreement and any amendments thereto
2. the Task Order
3. the RFTOP

SECTION 2. TASK ORDER ISSUANCE BY OC SAN

The Task Order issued by OC San shall, specifically or by reference to the RFTOP and corresponding proposal, set forth the terms that will apply to the specific project for which the services will be rendered. Those terms shall include, but not be limited to, scope of work, time for performance, and compensation.

SECTION 3. TERM

This Agreement shall commence on the effective date of this Agreement and terminate on June 30, 2027, unless further extended by written agreement signed by the Parties. Any work that is required by a Task Order and is not finished by the date of termination shall be continued and completed by the CONSULTANT and the terms and conditions of this Agreement shall continue in effect for that time. OC San may, at its option, renew this Agreement for two (2) additional terms of one (1) year each, for a maximum contract duration of five (5) years.

SECTION 4. COMPENSATION

The total compensation payable to the CONSULTANT pursuant to this Agreement shall not exceed One Million Dollars (\$1,000,000) per year in accordance with the terms described in SECTION 3 - TERM. The compensation includes, but is not limited to, fees for professional engineering services based on the CONSULTANT's burdened labor rates, overhead, and profit, and fees from the CONSULTANT's subconsultants/subcontractors (Subconsultants/Subcontractors). The specific amount of compensation payable to the CONSULTANT for services rendered on an individual project, pursuant to a Task Order, shall be established for each Task Order and shall not exceed Five Hundred Thousand Dollars (\$500,000) per individual Task Order unless authorized by OC San's Board of Directors. The CONSULTANT agrees and acknowledges that the execution of this Agreement does not in any way guarantee that a Task Order will be issued to the CONSULTANT. Moreover, execution of this Agreement shall not entitle the CONSULTANT to any form of payment or compensation from OC San without OC San first having issued a written Task Order.

A. Total Compensation

Total compensation for any Task Order shall not exceed the amount indicated in the approved Task Order and any approved amendments thereto.

B. Labor

As a portion of the total compensation to be paid to CONSULTANT, OC San shall pay to CONSULTANT a sum equal to the burdened salaries (salaries plus benefits) actually paid

by CONSULTANT charged on an hourly-rate basis to the project and paid to CONSULTANT's personnel. For each Task Order, the cost of benefits for CONSULTANT shall be based on the fringe rates identified in Attachment "E" – Rates Proposal. Upon request of OC San, CONSULTANT shall provide OC San with certified payroll records of all employees' work that is charged to the project.

C. Overhead

As a portion of the total compensation to be paid to CONSULTANT, for each Task Order, OC San shall compensate CONSULTANT for overhead at the rates equal to the percentage of burdened labor as specified in Attachment "E" – Rates Proposal.

D. Profit

For each Task Order, profit shall be ten percent (10%) of burdened labor and overhead for all CONSULTANT fees and its Major Subconsultants (Architecture & Engineering [A&E] consulting services) whose fees for services are greater than or equal to \$100,000. Profit shall remain fixed through the term of this Agreement, inclusive of any renewals identified in Section 3 – TERM.

As a portion of the total compensation to be paid to CONSULTANT and its Major Subconsultants, OC San shall pay profit for all services rendered by CONSULTANT and its Major Subconsultants for the Task Order as specified in the previous paragraph.

E. Subconsultants

For each Task Order, any Minor Subconsultant (A&E consulting services) whose fees for services are less than \$100,000 and any Subconsultant/Subcontractor (non-A&E consulting services), CONSULTANT shall pay to Subconsultant/Subcontractor total compensation based on an established hourly rate schedule by personnel classification. The hourly rates shall cover burdened salary costs, overhead and profit. The compensation for each Minor Subconsultants and Subconsultants/Subcontractors (non-A&E consulting services), including both labor related fees, and direct costs shall not exceed the amount, as negotiated prior to award of a Task Order.

For each Task Order, any Major Subconsultant (A&E consulting services) whose fees for services are greater than or equal to \$100,000, total compensation for labor will be based on burdened labor rates, overhead, and profit, as negotiated prior to award of Task Order. Prior to award of Task Order, the CONSULTANT shall provide to OC San, if available, an audit performed for another public agency which documents the Major Subconsultant's labor burden rate and overhead rate. This audit shall be the most current available and have been conducted for a period that ended within twelve months of the task order proposal due date. This information shall be provided by CONSULTANT within ten (10) business days from request by OC San.

F. Direct Costs

OC San shall reimburse CONSULTANT and its Subconsultants/Subcontractors the actual costs of permits and associated fees, travel, licenses, and other services in an amount not to exceed the sums set forth in each approved Task Order. OC San shall also pay to CONSULTANT actual costs for equipment rentals, leases or purchases with prior written

approval of OC San. Upon request, CONSULTANT shall provide to OC San receipts and other documentary records to support CONSULTANT's request for reimbursement of these amounts, refer to Attachment "D" – Allowable Direct Costs. All incidental expenses shall be included in the overhead cost pursuant to this SECTION 4 – COMPENSATION.

G. Other Direct Costs

OC San will reimburse the CONSULTANT for Other Direct Costs incurred by CONSULTANT and its Subconsultants/Subcontractors due to modifications in the scope of work resulting from field investigations and field work required by the Task Order. These items may include special equipment, test equipment and tooling, and other materials and services not previously identified. Refer to Attachment "D" – Allowable Direct Costs for payment information.

H. Reimbursable Direct Costs

OC San will reimburse the CONSULTANT for reasonable travel and business expenses as described in this section and further described in Attachment "D" – Allowable Direct Costs. The reimbursement of the above-mentioned expenses will be based on an "accountable plan" as considered by the Internal Revenue Service (IRS). The plan includes a combination of reimbursements based upon receipts and a "per diem" component approved by the IRS. The most recent schedule of the per diem rates utilized by OC San may be found on the U.S. General Services Administration website at <https://www.gsa.gov/travel/plan-book/per-diem-rates>.

The CONSULTANT shall be responsible for the most economical and practical means of management of reimbursable costs inclusive, but not limited to, travel, lodging, and meals arrangements. OC San shall apply the most economic and practical method of reimbursement which may include reimbursements based upon receipts and/or "per diem" as deemed the most practical.

CONSULTANT shall be responsible for returning to OC San any excess reimbursements after the reimbursement has been paid by OC San.

Travel and travel arrangements – Any travel involving airfare, overnight stays, or multiple day attendance must be approved by OC San in advance.

Local travel is considered travel by the CONSULTANT within OC San general geographical area which includes Orange, Los Angeles, Ventura, San Bernardino, Riverside, San Diego, Imperial, and Kern Counties. Automobile mileage is reimbursable if CONSULTANT is required to utilize a personal vehicle for local travel.

Lodging – Overnight stays will not be approved by OC San for local travel. However, under certain circumstances overnight stay may be allowed at the discretion of OC San based on reasonableness of meeting schedules and the amount of time required for travel by the CONSULTANT. Such determination will be made on a case-by-case basis and at the discretion of OC San.

Travel Meals – Per diem rates as approved by the IRS shall be utilized for travel meals reimbursements. Per diem rates shall be applied to meals that are appropriate for travel times. Receipts are not required for the approved meals.

Additional details related to the reimbursement of the allowable direct costs are provided in Attachment "D" – Allowable Direct Costs.

I. Limitation of Costs

If, at any time, CONSULTANT estimates the cost of performing the services described in CONSULTANT's proposal will exceed seventy-five percent (75%) of the not to exceed amount of the Task Order, including any approved additional compensation, CONSULTANT shall notify OC San immediately, in writing. The written notice shall indicate the additional amount necessary to complete the services. Any cost incurred in excess of the approved not to exceed amount, without the express written consent of OC San's authorized representative, shall be at CONSULTANT's own risk. This written notice shall be provided separately from, and in addition to, any notification requirements contained in the CONSULTANT's invoice and monthly progress report. Failure to notify OC San that the services cannot be completed within the authorized not to exceed amount of a Task Order is a material breach of this Agreement.

J. Method of Payment:

The CONSULTANT shall submit for approval by OC San, monthly invoices based on the total services which have been satisfactorily completed and specifying a percentage of completion. The CONSULTANT's billings shall be certified for payment by OC San only after OC San has determined that the CONSULTANT has completed each applicable project task.

CONSULTANT shall submit separate invoices for each Task Order on a monthly basis.

CONSULTANT understands that submitted costs are subject to Section 11 - AUDIT PROVISIONS, below.

K. Task Order Completion

Upon satisfactory completion by CONSULTANT of the work called for under the terms of the Task Order and upon acceptance of such work by OC San, CONSULTANT will be paid the unpaid balance of any money due for such work.

Upon satisfactory completion of the work performed under each Task Order and prior to final payment under each Task Order for such work or prior settlement upon termination of this Agreement, and as a condition precedent thereto, CONSULTANT shall execute and deliver to OC San a release of all claims against OC San arising under or by virtue of this Agreement other than such claims, if any, as may be specifically exempted by CONSULTANT from the operation of the release in stated amounts to be set forth therein.

L. False Claims

Pursuant to the California False Claims Act (Government Code Sections 12650-12655), any CONSULTANT that knowingly submits a false claim to OC San for compensation under the terms of this Agreement may be held liable for treble damages and up to a Ten Thousand Dollars (\$10,000) civil penalty for each false claim submitted. This section shall also be binding on all Subconsultants/Subcontractors.

The CONSULTANT or its Subconsultants/Subcontractors shall be deemed to have submitted a false claim when the CONSULTANT or its Subconsultants/Subcontractors: (a) knowingly presents or causes to be presented to an officer or employee of OC San a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by OC San; (c) conspires to defraud OC San by getting a false claim allowed or paid by OC San; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to OC San; or (e) is a beneficiary of an inadvertent submission of a false claim to OC San and fails to disclose the false claim to OC San within a reasonable time after discovery of the false claim.

M. California Department of Industrial Relations (DIR) Registration and Record of Wages:

To the extent the CONSULTANT's employees and/or its Subconsultants/Subcontractors who will perform work during the design, preconstruction, and construction phases of a construction contract for which Prevailing Wage Determinations have been issued by the DIR and as more specifically defined under Labor Code Section 1720 et seq., CONSULTANT and its Subconsultants/Subcontractors shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4, the work is subject to compliance monitoring and enforcement by the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776 and shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Penalties for non-compliance with the requirements of Labor Code section 1776 may be deducted from progress payments per Labor Code section 1776.

Pursuant to Labor Code section 1776, the CONSULTANT and its Subconsultants/Subcontractors shall furnish a copy of all certified payroll records to OC San and/or general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 16461(e).

N. Record of Expenses:

The CONSULTANT shall keep complete and accurate records of all costs and expenses incidental to services covered by this Agreement. Such records will be made available to OC San upon request.

O. Reallocation of Total Compensation:

OC San, by its Director of Engineering, shall have the right to approve a reallocation of the incremental amounts constituting the total compensation payable under the Task Order, provided that the total compensation for the Task Order is not increased.

SECTION 5. LIMITATIONS UPON SUBCONTRACTING AND ASSIGNMENT

The CONSULTANT shall not contract with any other person or entity to perform the services required without the written approval of OC San. This Agreement may not be assigned voluntarily or by operation of law without the prior written approval of OC San. If the CONSULTANT is permitted to subcontract any part of this Agreement by OC San, the CONSULTANT shall be responsible to OC San for the acts and omissions of its Subconsultant/Subcontractor, as it is for persons directly employed by the CONSULTANT. Nothing contained in this Agreement shall create any contractual relationship between any Subconsultant/Subcontractor and OC San. OC San will deal directly with and will make all payments to the CONSULTANT.

SECTION 6. CHANGES TO SCOPE OF WORK

In the event of a change in the scope of work as requested by OC San or any other changes to the Task Order, the Parties shall execute an amendment to the Task Order setting forth with particularity all new terms of the Task Order, including, but not limited to, any additional compensation.

SECTION 7. DOCUMENT OWNERSHIP – CONSULTANT PERFORMANCE

- A. All documents in all forms (electronic, paper, etc.), including, but not limited to, studies, sketches, drawings, computer printouts, disk files, and electronic copies prepared in connection with or related to the scope of work shall be the property of OC San. OC San's ownership of these documents includes use of, reproduction or reuse of, and all incidental rights, whether or not the work for which they were prepared has been performed. OC San's ownership entitlement arises upon payment or any partial payment for work performed and includes ownership of any and all work product completed prior to that payment. This section shall apply whether the CONSULTANT's services are satisfied by the completion of the Agreement or are terminated in accordance with other provisions of this Agreement. Notwithstanding any other provision of this section or Agreement, the CONSULTANT shall have the right to make copies of all such plans, studies, sketches, drawings, computer printouts and disk files, and specifications.
- B. CONSULTANT shall not be responsible for damage caused by subsequent changes to or uses of the deliverables where the subsequent changes or uses are not authorized or approved by CONSULTANT, provided that the service rendered by CONSULTANT was not a proximate cause of the damage.
- C. Copies of Work Product

Upon completion of the work required for each Task Order, the CONSULTANT shall deliver to OC San the number of copies specified in the specific Task Order scope of work of the final report containing the CONSULTANT's findings, conclusions, recommendations, and all supporting documentation and/or final design drawings and specifications. Each Task Order will define the requirements for the deliverables.

SECTION 8. INSURANCE

A. General:

- i. Insurance shall be issued and underwritten by insurance companies acceptable to OC San.
- ii. Insurers must have an "A-" Policyholder's Rating, or better, and Financial Rating of at least Class VIII, or better, in accordance with the most current A.M. Best's Guide Rating. However, OC San will accept State Compensation Insurance Fund for the required policy of Worker's Compensation Insurance subject to OC San's option to require a change in insurer in the event the State Fund financial rating is decreased below "B". Further, OC San will require CONSULTANT to substitute any insurer whose rating drops below the levels herein specified. Said substitution shall occur within twenty (20) days of written notice to CONSULTANT by OC San or its agent.
- iii. Coverage shall be in effect prior to the commencement of any work under this Agreement.

B. General Liability:

The CONSULTANT shall maintain during the life of this Agreement, including the period of warranty, Commercial General Liability Insurance written on an occurrence basis providing the following minimum limits of liability coverage: Two Million Dollars (\$2,000,000) per occurrence with Four Million Dollars (\$4,000,000) aggregate. If aggregate limits apply separately to this Agreement (as evidenced by submission of ISO form CG 25 03 or CG 25 04, or equivalent), then the aggregate limit may be equivalent to the per occurrence limit. Said insurance shall include coverage for the following hazards: Premises-Operations, blanket contractual liability (for this Agreement), products liability/completed operations (including any product manufactured or assembled), broad form property damage, blanket contractual liability, independent contractors liability, personal and advertising injury, mobile equipment, and cross liability and severability of interest clauses. A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement(s). If requested by OC San and applicable, XCU coverage (Explosion, Collapse and Underground) and Riggers/On Hook Liability must be included in the General Liability policy and coverage must be reflected on the submitted Certificate of Insurance.

C. Umbrella Excess Liability:

The minimum limits of general liability and automobile liability insurance required, as set forth herein, shall be provided for through either a single policy of primary insurance or a combination of policies of primary and umbrella excess coverage. Umbrella excess liability coverage shall be issued with limits of liability which, when combined with the primary insurance, will equal the minimum limits for general liability and automobile liability.

D. Automobile/Vehicle Liability Insurance:

The CONSULTANT shall maintain a policy of automobile liability insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and other vehicles providing the following minimum limit of liability coverage: combined single limit of One Million Dollars (\$1,000,000). A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement.

E. Drone Liability Insurance:

If a drone will be used, drone liability insurance must be maintained by the CONSULTANT in the amount of One Million Dollars (\$1,000,000) in a form acceptable to OC San.

F. Worker's Compensation Insurance:

The CONSULTANT shall provide such Workers' Compensation Insurance as required by the Labor Code of the State of California in the amount of the statutory limit, including Employer's Liability Insurance with a minimum limit of One Million Dollars (\$1,000,000) per occurrence. Such Worker's Compensation Insurance shall be endorsed to provide for a waiver of subrogation in favor of OC San. A statement on an insurance certificate will not be accepted in lieu of the actual endorsements unless the insurance carrier is the State of California Insurance Fund and the identifier "SCIF" and applicable endorsements are referenced on the certificate of insurance. If an exposure to Jones Act liability may exist, the insurance required herein shall include coverage for Jones Act claims.

G. Errors and Omissions/Professional Liability:

The CONSULTANT shall maintain in full force and effect, throughout the term of this Agreement, standard industry form professional liability/errors and omissions insurance coverage with coverage limits of not less than Two Million Dollars (\$2,000,000) in accordance with the provisions of this paragraph. If the policy of insurance is written on a "claims made" basis, said policy shall be continued in full force and effect at all times during the term of this Agreement and for a period of five (5) years from the date of the completion of the services hereunder.

In the event of termination of said policy during this period, the CONSULTANT shall obtain continuing insurance coverage for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement. Said coverage shall be evidenced by either a new policy evidencing no gap in coverage or by separate extended "tail" coverage with the present or new carrier.

In the event the present policy of insurance is written on an "occurrence" basis, said policy shall be continued in full force and effect during the term of this Agreement or until completion of the services provided for in this Agreement, whichever is later. In the event of termination of said policy during this period, new coverage shall be obtained for the required period to insure for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement.

The CONSULTANT shall provide to OC San a certificate of insurance in a form acceptable to OC San indicating the deductible or self-retention amounts and the expiration date of said policy and shall provide renewal certificates not less than ten (10) days prior to the expiration of each policy term.

H. Proof of Coverage:

The CONSULTANT shall furnish OC San with original certificates and amendatory endorsements effecting coverage. Said policies and endorsements shall conform to the requirements herein stated. All certificates and endorsements must be received and accepted by OC San before work commences. OC San reserves the right to require, at any time, complete, certified copies of all required insurance policies, including endorsements, effecting the coverage required. The following are approved forms that must be submitted as proof of coverage:

- | | |
|--|--|
| • Certificate of Insurance | ACORD Form 25 or other equivalent Certificate of Insurance form |
| • Additional Insurance (General Liability) | The combination of (ISO Forms) CG 2010 <u>and</u> CG 2037 |
| | All other additional insured endorsements must be submitted for approval by OC San and OC San may reject alternatives that provide different or less coverage to OC San. |
| • Additional Insured (Auto Liability) | Submit Endorsement provided by carrier for OC San's approval. |
| • Waiver of Subrogation | Submit workers' compensation waiver of subrogation endorsement provided by carrier for OC San's approval. |
| • Cancellation Notice | No endorsement is required. However, Vendor/Contractor is responsible for notifying OC San of any pending or actual insurance policy cancellation, as described in Article I. Cancellation and Policy Change Notice below. |

I. Cancellation and Policy Change Notice:

The CONSULTANT is required to notify OC San in writing of any insurance cancellation notice it receives or other knowledge of pending or actual insurance policy cancellation, within two (2) working days of receipt of such notice or acquisition of such knowledge. Additionally, the CONSULTANT is required to notify OC San in writing of any change in the terms of insurance, including reduction in coverage or increase in deductible/SIR, within two (2) working days of receipt of such notice or knowledge of same.

Said notices shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Contracts, Purchasing & Materials Management Division

J. Primary Insurance:

All liability policies (with the exception of Workers' Compensation and Professional Liability) shall contain a Primary and Non-Contributory Clause. Any other insurance maintained by OC San shall be excess and not contributing with the insurance provided by the CONSULTANT.

K. Separation of Insured:

All liability policies (with the exception of Workers' Compensation and Professional Liability) shall contain a "Separation of Insureds" clause.

L. Non-Limiting (if applicable):

Nothing in this document shall be construed as limiting in any way, nor shall it limit the indemnification provision contained in this Agreement or the extent to which the CONSULTANT may be held responsible for payment of damages to persons or property.

M. Deductibles and Self-Insured Retentions:

Any deductible and/or self-insured retention must be declared to OC San on the Certificate of Insurance. All deductibles and/or self-insured retentions require acceptance by OC San. At the option of OC San, either: a) the insurer shall reduce or eliminate such deductible or self-insured retention as respects OC San or b) the CONSULTANT shall provide a financial guarantee satisfactory to OC San guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

N. Defense Costs:

Liability policies, with the exception of Professional Liability, shall have a provision that defense costs for all insureds and additional insureds are paid in addition to and do not deplete any policy limits.

O. Subconsultants/Subcontractors:

The CONSULTANT shall be responsible to establish insurance requirements for Subconsultants/Subcontractors hired by the CONSULTANT. The insurance shall be in amounts and types reasonably sufficient to deal with the risk of loss involving the Subconsultants'/Subcontractors' operations and work.

P. Limits Are Minimums:

If the CONSULTANT maintains higher limits than any minimums shown above, then OC San requires and shall be entitled to coverage for the higher limits maintained by the CONSULTANT.

SECTION 9. PROJECT TEAM AND SUBCONSULTANTS

CONSULTANT shall provide to OC San, prior to execution of a Task Order, the names and full descriptions of all Subconsultants/Subcontractors and CONSULTANT's project team members anticipated to be used in performing work under a Task Order. In its proposal, CONSULTANT shall include a description of the work and services to be performed by each Subconsultant/Subcontractor and each of CONSULTANT's project team members. CONSULTANT shall include the respective compensation amounts for CONSULTANT and each Subconsultant/Subcontractor broken down as indicated in Section 4 – COMPENSATION, above.

There shall be no substitution of the listed Subconsultants/Subcontractors and CONSULTANT's project team members without prior written approval by OC San.

SECTION 10. ENGINEERING REGISTRATION

The CONSULTANT's personnel and its Subconsultants/Subcontractors shall be comprised of registered engineers and a staff of specialists and draftsmen in each department. The firm itself is not a registered engineer but represents and agrees that when the performance of this Agreement requires the services of a registered engineer, such services hereunder will be performed under the direct supervision of registered engineers who are registered in the State of California.

SECTION 11. AUDIT PROVISIONS

- A. OC San retains the reasonable right to access, review, examine, and audit any and all books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify that the CONSULTANT is in compliance with all the requirements under this Agreement. The CONSULTANT shall include OC San's right as described above in any and all of their subcontracts and shall ensure that these rights are binding upon all its Subconsultants/Subcontractors.
- B. OC San retains the right to examine CONSULTANT's books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify all direct and indirect costs, of whatever nature, which are claimed to have been incurred, or anticipated to be incurred, or to ensure CONSULTANT's compliance with all the requirements under this Agreement during the term of this Agreement and for a period of three (3) years after expiration or earlier termination of the Agreement.
- C. The CONSULTANT shall maintain complete and accurate records in accordance with generally accepted industry standard practices and OC San's policy. The CONSULTANT shall make available to OC San for review and audit all project-related accounting records and documents and any other financial data within fifteen (15) days

after receipt of notice from OC San. Upon OC San's request, the CONSULTANT shall submit exact duplicates of originals of all requested records to OC San. If an audit is performed, the CONSULTANT shall ensure that a qualified employee of the CONSULTANT will be available to assist OC San's auditor in obtaining all project related accounting records and documents and any other financial data.

SECTION 12. LEGAL RELATIONSHIP BETWEEN PARTIES

The legal relationship between the Parties is that of an independent contractor and nothing herein shall be deemed to transform the CONSULTANT, its staff, independent contractors, or its Subconsultants/Subcontractors, into agents or employees of OC San and shall obtain no rights to any benefits which accrue to OC San's employees. CONSULTANT's staff performing services under the Agreement shall at all times be employees and/or independent contractors of the CONSULTANT. The CONSULTANT shall monitor and control its staff and wages, salaries, and other amounts due directly to its staff in connection with the Agreement. The CONSULTANT shall be responsible for hiring, review, and termination of its staff and shall be accountable for all reports and obligations respecting them, such as social security, income tax withholding, unemployment compensation, workers' compensation insurance, and similar matters.

SECTION 13. NOTICES

All notices hereunder and communications regarding the interpretation of the terms of this Agreement, or changes thereto, shall be effected by delivery of said notices in person or by depositing said notices in the U.S. mail, registered or certified mail, return receipt requested, postage prepaid.

Notice shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Ludwig Lapus, Principal Contracts Administrator
Copy: Daniel Berokoff, Engineering Supervisor

Notice shall be mailed to CONSULTANT at:

SPEC Services, Inc.
10540 Talbert Ave., Suite 100 East
Fountain Valley, CA 92708-6051
Attention: Chris Todd

All communication regarding the Task Order will be addressed to the Project Manager. Direction from other OC San staff must be approved in writing by OC San's Project Manager prior to action from the CONSULTANT.

SECTION 14. TERMINATION

OC San may terminate this Agreement at any time, without cause, upon giving thirty (30) days written notice to the CONSULTANT. In the event of such termination, the CONSULTANT shall be entitled to compensation for work performed on a prorated basis through and including the effective date of termination.

The CONSULTANT shall be permitted to terminate this Agreement upon thirty (30) days written notice only if the CONSULTANT is not compensated for billed amounts in accordance with the provisions of this Agreement when the same are due. Notice of termination shall be mailed to OC San at the address listed in Section 13 – NOTICES, above.

SECTION 15. COMPLIANCE

The CONSULTANT certifies by the execution of this Agreement that it pays employees not less than the minimum wage as defined by law and that it does not discriminate in its employment with regard to race, color, religion, sex, or national origin; that it is in compliance with all Federal, State, and local directives and executive orders regarding non-discrimination in employment; and that it agrees to demonstrate positively and aggressively the principle of equal opportunity in employment.

The CONSULTANT shall comply with all applicable laws, ordinances, codes, and regulations of Federal, State, and local government in all aspects related to this Agreement and any work completed for OC San.

SECTION 16. AGREEMENT EXECUTION AUTHORIZATION

Both OC San and the CONSULTANT do covenant that each individual executing this document by and on behalf of each Party is a person duly authorized to execute this Agreement for that Party.

SECTION 17. DISPUTE RESOLUTION

In the event of a dispute arising between the Parties regarding performance or interpretation of this Agreement, the dispute shall be resolved by binding arbitration under the auspices of the Judicial Arbitration and Mediation Service (“JAMS”), or similar organization or entity conducting alternate dispute resolution services.

SECTION 18. ATTORNEY’S FEES, COSTS, AND NECESSARY DISBURSEMENTS

If any action at law or inequity or if any proceeding in the form of an Alternative Dispute Resolution is necessary to enforce or interpret the terms of this Agreement, the prevailing Party shall be entitled to reasonable attorney’s fees, costs and necessary disbursements in addition to any other relief to which it may be entitled.

SECTION 19. WARRANTY

CONSULTANT shall perform its services in accordance with generally accepted industry and professional standards. If, within the 12-month period following completion of its services, OC San informs the CONSULTANT that any part of the services fails to meet those standards, the CONSULTANT shall, within the time prescribed by OC San and agreed to with CONSULTANT, take all such actions as are necessary to correct or complete the noted deficiency(ies).

SECTION 20. INDEMNIFICATION

To the fullest extent permitted by law, the CONSULTANT shall indemnify, defend (at the CONSULTANT’s sole cost and expense and with legal counsel approved by OC San,

which approval shall not be unreasonably withheld), protect and hold harmless OC San and all of OC San's officers, directors, employees, consultants, and agents (collectively the "Indemnified Parties"), from and against any and all claims, damages, liabilities, causes of action, suits, arbitration awards, losses, judgments, fines, penalties, costs, and expenses (including, without limitation, attorneys' fees, disbursements and court costs, and all other professional, expert, or CONSULTANT's fees and costs, and OC San's general and administrative expenses) individually, a "Claim" and collectively, "Claims", which may arise from or are in any manner related, directly or indirectly, to any work performed or any operations, activities, or services provided by the CONSULTANT in carrying out its obligations under this Agreement to the extent of the negligent, recklessness, and/or willful misconduct of the CONSULTANT, its principals, officers, agents, employees, CONSULTANT's suppliers, Subconsultants, Subcontractors, and/or anyone employed directly or indirectly by any of them, regardless of any contributing negligence or strict liability of an Indemnified Party. Notwithstanding the foregoing, nothing herein shall be construed to require the CONSULTANT to indemnify the Indemnified Parties from any Claim arising solely from:

- (A) the active negligence or willful misconduct of the Indemnified Parties; or
- (B) a natural disaster or other act of God, such as an earthquake; or
- (C) the independent action of a third party who is neither one of the Indemnified Parties nor the CONSULTANT, nor its principal, officer, agent, employee, nor the CONSULTANT's supplier, Subconsultant, Subcontractor, nor anyone employed directly or indirectly by any of them.

Exceptions (A) through (B) above shall not apply, and the CONSULTANT shall, to the fullest extent permitted by law, indemnify the Indemnified Parties from Claims arising from more than one cause if any such cause taken alone would otherwise result in the obligation to indemnify hereunder.

The CONSULTANT's liability for indemnification hereunder is in addition to any liability the CONSULTANT may have to OC San for a breach by the CONSULTANT of any of the provisions of this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit the CONSULTANT's indemnification obligation or other liability hereunder. The terms of this Agreement are contractual and the result of negotiation between the Parties. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code section 1654) that ambiguities are to be construed against the drafting Party shall not be employed in the interpretation of this Agreement.

SECTION 21. DUTY TO DEFEND

The duty to defend hereunder is wholly independent of and separate from the duty to indemnify and such duty to defend shall exist regardless of any ultimate liability of the CONSULTANT and shall be consistent with Civil Code section 2782.8. Such defense obligation shall arise immediately upon presentation of a Claim by any person if, without regard to the merit of the Claim, such Claim could potentially result in an obligation to indemnify one or more Indemnified Parties and upon written notice of such Claim being provided to the CONSULTANT. Payment to the CONSULTANT by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition

precedent to enforcing such Indemnified Party's rights to indemnification hereunder. In the event a final judgment, arbitration, award, order, settlement, or other final resolution expressly determines that the Claim did not arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONSULTANT, to any extent, then OC San will reimburse the CONSULTANT for the reasonable costs of defending the Indemnified Parties against such Claims.

The CONSULTANT's indemnification obligation hereunder shall survive the expiration or earlier termination of this Agreement until such time as action against the Indemnified Parties for such matter indemnified hereunder is fully and finally barred by the applicable statute of limitations.

SECTION 22. COMPLIANCE WITH OC SAN POLICIES AND PROCEDURES

The CONSULTANT shall be required to comply with all OC San policies and procedures. OC San requires the CONSULTANT and its Subconsultants/Subcontractors to follow and ensure their employees follow all Federal, State, and local regulations as well as OC San's safety standards while working at OC San locations. If during the course of the contract it is discovered that OC San's safety standards do not comply with Federal, State, or local regulations, then the CONSULTANT is required to follow the most stringent regulatory requirement at no additional cost to OC San. The CONSULTANT and all of its employees and Subconsultants/Subcontractors shall adhere to all applicable Contractor Safety Standards attached hereto as Attachment "L".

SECTION 23. GOVERNING LAW

This Agreement shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in Orange County in the event any action is brought in connection with this Agreement or the performance thereof.

SECTION 24. TIME OF ESSENCE

Time is of the essence in the performance of this Agreement.

SECTION 25. CONFLICT OF INTEREST

The CONSULTANT covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of the services contemplated by this Agreement. No person having such interest shall be employed by or associated with the CONSULTANT.

SECTION 26. ENTIRE AGREEMENT

This Agreement constitutes the entire understanding and agreement between the Parties and supersedes all previous negotiations between them pertaining to the subject matter hereof.

[THIS SECTION INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, this Agreement has been executed in the name of OC San and the CONSULTANT by their respective duly authorized officers, as of the date first written above.

SPEC SERVICES, INC.

By _____ Date _____

Printed Name & Title

ORANGE COUNTY SANITATION DISTRICT

By _____ Date _____
Chad P. Wanke
Board Chairman

By _____ Date _____
Kelly A. Lore
Clerk of the Board

By _____ Date _____
Ruth Zintzun
Finance & Procurement Manager

Attachments: Attachment "A" Sample Scope of Work
Attachment "B" Not Used
Attachment "C" Not Used
Attachment "D" Allowable Direct Costs
Attachment "E" Rates Proposal
Attachment "F" Not Used
Attachment "G" Not Used
Attachment "H" Not Used
Attachment "I" Not Used
Attachment "J" Not Used
Attachment "K" Not Used
Attachment "L" Contractor Safety Standards
Attachment "M" Iran Contracting Act Verification

ATTACHMENT “A”

SAMPLE SCOPE OF WORK

ATTACHMENT "A"

SAMPLE SCOPE OF WORK DESCRIPTION

OC SAN staff will develop detailed scope of work to be included in each Request for Task Order Proposal (RFTOP). The RFTOP will require Consultants to base their proposals on the scope of work included in the RFTOP. The remainder of this document are the templates typically used for design projects. Notes to scope editor are shown, although they will be removed before a scope of work is included in a RFTOP. Yellow highlighted text indicates where project specific information or a hypothetical example is given.

Design Task Order

Attachment A - Scope of Work

1 PROJECT REQUIREMENTS

Provide professional design engineering services for the project described herein.

1.1 BACKGROUND

- A. The Secondary Clarifiers at Plant No. 1 were constructed under Project Nos. P1-16 (1973), P1-36-2 (1995), and P1-82 (2005). A buried ductile iron plant water line around the secondary clarifiers feeds the scum sprayers and hose bibs. Because the plant water chemical composition is so corrosive to ductile iron, many failures have occurred.

1.2 GENERAL PROJECT DESCRIPTION

- A. This project includes the replacement of approximately 1800 feet of existing 6-inch ductile iron buried plant water piping, valves, fittings, and connections.
- B. A location map is provided in **Figure 1**.

[insert location map]

Figure 1 - Project Location Map

1.3 PROJECT ELEMENTS

- A. **Element 1: Piping** – Replace the existing 1,800 feet of 6-inch buried ductile iron plant water piping with new 6-inch plant water piping.
- B. Assumptions for level of effort:
1. 1,600 feet of piping shall be below grade and 200 feet shall be either above or below grade.
 - a. 1,600 feet of piping is located around the Secondary Clarifiers. Assume high-density polyethylene (HDPE) as the pipe material with appropriate dimension ratio value.
 - b. 200 feet of piping will re-route the existing plant water line on the northwest end of the Secondary Clarifiers. Recent projects disconnected the existing plant water line at various locations resulting in an incomplete loop. This piping will reconnect the lines to allow for a complete loop. See Exhibit 13.1 for photos and Exhibit 13.3 for proposed routing design.
 - (1) For above grade pipe material, assume cement-lined ductile iron or fiberglass-reinforced plastic.
 2. Follow existing alignment with new pipe. New alignments shall be kept as close to the existing alignment as feasible.
 - a. The Secondary Effluent Junction Box No. 4 (SEJB-4), located at the southwest corner of the Secondary Clarifiers, is congested with various utilities, such as plant water, secondary effluent, and reclaimed water lines, and associated valves. Follow the existing alignment in this important area.
 - b. Concrete encasement of HDPE, located on the west side of the Secondary Clarifiers on Fuentes Road, was installed under project P1-102 (2006). Assume potholing is necessary to survey the edge of the concrete and confirm the limits of the existing concrete encasement

do not interfere with this project. As much as possible, the new alignment shall avoid the concrete encasement.

1.4 PROJECT SCHEDULE

- A. **Table 1** lists major project deliverables along with Orange County Sanitation District's (OC SAN) review and approval periods. CONSULTANT shall comply with the deadlines indicated in that table. OC SAN will consider an alternative CONSULTANT proposed schedule provided it is consistent with OC SAN resources, schedule constraints, and adds value. The negotiated durations will set the design baseline schedule.

Table 1 – Project Milestones and Deadlines

MILESTONE	DEADLINE
Kickoff Meeting	The kickoff meeting will be scheduled to coincide with the Project Notice to Proceed (NTP).
Preliminary Design Memo (PDM)	[XX] workdays from Preliminary Design Phase NTP.
OC SAN Review of PDM	10 workdays from receipt of PDM.
Submit Design Submittal 3 (DS3)	[YY] workdays from approval of PDM.
OC SAN Review of DS3	15 workdays from receipt of DS3.
Submit Final Design Submittal (FDS)	15 workdays from receipt of OC SAN comments on DS3.
OC SAN Review of FDS	10 workdays from receipt of FDS.
Submit Final Technical Plans and Specifications (FTPS)	15 workdays from receipt of OC SAN comments on FDS.
Total	[ZZZ] workdays

1.5 PROJECT MANAGEMENT

- A. CONSULTANT shall be responsible for managing CONSULTANT's project execution, schedule, budget, subconsultants, and coordination with other projects.
- B. Per **Exhibit 18**, PMWeb will be used for the management of this agreement.
- C. [Monthly Progress Report: Submit monthly progress reports at the same time as monthly invoices that include the following contents:
1. Work activities completed to date, in the current reporting period, and projected for the coming month.
 2. A brief description of outstanding issues and potential cost, schedule, quality impacts.
 3. Potential changes in the project scope or design scope.
 4. Any corrective actions needed to avoid potential impacts.
 5. Budget status: actual costs to date, costs to complete, and costs at completion.
 6. Schedule status: variances between scheduled and forecasted milestone dates.]
- D. Monthly Invoices: Provide a monthly cost report and/or invoices, which shall document the man-hours and billing rate for each person that works on the project, and shall include the following:
1. Budget
 2. Current billing period invoicing
 3. Previous billing period "total invoiced to date"
 4. Budget Amount Remaining
 5. Current billing period "total percent invoiced to date"

1.6 QUALITY CONTROL

- A. Provide Quality Assurance and Quality Control of the work.
- B. Provide documentation upon request that the CONSULTANT has performed a quality control review in-house, and all the comments have been addressed prior to providing any submittals to OC SAN.

1.7 PROJECT MEETINGS

- A. CONSULTANT shall communicate throughout the project to keep OC SAN apprised of the job, review work-in-progress, share information, discuss project submittals, present findings of technical analyses, receive and resolve comments, and obtain decisions and direction by OC SAN staff.
 - 1. **Table 2** below lists the anticipated meetings and site visits. Microsoft Teams shall be used for meetings. CONSULTANT will provide an agenda 2 workdays prior to each meeting. Meeting minutes will be submitted to the OC SAN project manager for review within 3 workdays of the meeting.

Table 2 – Project Assumed Meetings and Site Visits

DESIGN ACTIVITY	MEETINGS	SITE VISITS
Kickoff Meeting	1 (1-hour)	
PDM	Progress meeting (1-hour, every 2 weeks)	8 hours
PDM Workshop	2 (1-hour)	
DS3	Progress meeting (1-hour, every 2 weeks)	8 hours
DS3 Workshop	2 (1-hour)	
FDS	Progress meeting (1-hour, weekly)	
FDS Workshop	1 (1-hour)	
FTPS	Progress meeting (1-hour, weekly)	
Construction Services	6 hours	24 hours
Closeout	4 hours	12 hours

1.8 SUBMITTAL REVIEWS

- A. Deliverables (other than specifications) shall be submitted in searchable PDF format with no hard copy. Deliverables shall be bookmarked and hyperlinked for navigation per **Exhibit 14**.
- B. OC SAN has standardized on the use of Bluebeam Revu for reviewing and providing comments to PDF files. The purpose of the studio session is to provide review and collaboration. OC SAN staff will create the Bluebeam studio session, invite attendees, configure, and manage the studio session. Make drawing submittals in Bluebeam and respond to OC SAN comments in Bluebeam per **Exhibit 15**.

1.9 SPECIFICATIONS

- A. Prior to preparing or editing specifications, CONSULTANT shall meet with OC SAN staff to determine which OC SAN and CONSULTANT provided specifications should be included in the design. After discussions, all specifications should be loaded in Microsoft Teams (Teams) early in design and prior to editing for DS3.
- B. Tailor all specifications to project and remove requirements that do not apply.
- C. Unless a CONSULTANT is using their own specification management software, Specifications should remain in Teams for editing throughout design. Make all edits to specifications hosted in Teams. Unless agreed to, Specifications should not be removed from Teams or edited elsewhere.
- D. Provide specifications as Microsoft Word (Word) files with Track Changes enabled throughout design.

- E. OC SAN staff will review specifications during submittal review periods. CONSULTANT shall respond to OC SAN comments using Word “Reply” and “Resolve.” CONSULTANT shall “Reply” to each OC SAN comment describing how the comment will be addressed and revise the specification, as needed, to address the comment. “Resolve” will be used by the reviewer or designee to confirm their comment has been addressed. For more information see **Exhibit 16**.
- F. Prior to advertisement, all Word comments and revisions shall be Track Changes accepted, rejected, resolved, or deleted by OC SAN staff prior to bid.

2 PRELIMINARY DESIGN

All significant material and equipment decisions are to be made before the start of Design. At the end Preliminary Design, major design elements shall be fixed, and major equipment, footprints, and utility connection locations shall be well established. The extent of the design and the number and type of drawings shall also be established.

2.1 PRELIMINARY DESIGN AND PDM

- A. The PDM shall consist of a PowerPoint presentation. Present PDM findings and recommendations to OC SAN in a stakeholder meeting using the PowerPoint presentation mentioned in this section for consensus before the start of Design.
- B. Identify any equipment that has one competitive supplier (i.e., sole source). In those cases, recommend an appropriate procurement strategy compatible with California Law and OC SAN policies.
- C. Develop 2 conceptual design alternatives for the plant water piping alignment.
 - 1. Alternatives:
 - a. Reuse exiting alignment and existing points of connection
 - b. Alternate alignment along tunnels in and around secondary clarifiers
 - 2. Perform the following with each alternative:
 - a. Cost, benefit, and life cycle analysis.
 - b. Identify plant water construction shutdown requirements with estimated durations.
 - c. Identify construction access requirements and limitations.
 - d. Prepare preliminary drawings (sketches).
 - 3. Discuss the available alternatives with OC SAN. The PDM shall include the recommendation alternative.
- D. Prepare drawings showing:
 - 1. Proposed alignment of piping
 - 2. Proposed piping materials and quantities
 - 3. Proposed quantity and type of valves and valve cans
 - 4. Proposed connection points which include the following:
 - a. New replacement pipes connecting to existing main plant water line
 - b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
 - 5. Demolition of existing ductile iron pipes and valves
 - 6. Proposed design of new valves and valve cans
 - 7. Proposed design of connection points
 - a. New replacement pipes connecting to existing main plant water lines

- b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
- 8. Proposed design of pipe supports by typical detail and max spacing table
- E. Summarize key constructability and construction sequencing constraints.
 - 1. Develop process flow schematic of the components of the plant water system at Plant No. 1 that impact the pipelines being replaced.
- F. Prepare preliminary construction schedule.
- G. Prepare P&IDs: Fully detailed for each design "module", e.g., 1 pump set typical of all with proposed tagging strategy.
- H. Perform any potholing activities required for the concrete encasement survey specified under Element 1.
- I. Quantify soil contamination by determining the volume of excavation work needed to perform the Work. Coordinate with OC SAN ENGINEER to determine the area of excavation. Soil testing is not necessary.
- J. Develop testing requirements. Assume:
 - 1. Pressure leak and valve testing shall be included.
 - 2. Plant water operating pressure is 110 PSI.

2.2 PRELIMINARY DESIGN CONSTRUCTION COST ESTIMATE

- A. Prepare an AACE International Class 3 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01. Data used to prepare the cost estimate shall be included as an attachment to the PDM.
 - 1. Determine project specific and appropriate values to use for the percentages for profit, bond, and insurance.
 - 2. Costs for project level allowance, insurance, profit, and bond shall be cumulative and listed as individual line items.
 - 3. Allowances or mark ups should be well explained and itemized.
 - a. Include "Market Volatility" allowance of xx%.(revise based on the market conditions)
 - b. Do not setup allowance for change orders.
 - c. Do not escalate to midpoint of construction - this is by OC SAN.
 - 4. Specialty work should be recently (under 6 months) estimated by vendor.
 - a. For example, sewer bypassing services should be estimated by vendor (i.e., Rain 4 Rent).
 - b. Provide vendor quotes for high-cost equipment.
 - c. Minor equipment costs may be documented by written telephone quotations.
 - 5. Provide breakdown of lump sum costs.
 - 6. Show labor rates so they can be checked.
 - 7. Provide all back back up for all documentation obtained for the cost estimate purposes. The cost estimate back up shall have the date and the vendor name/contact name. If catalog price is used, provide the year of that publication.
- B. Prepare estimate of construction duration. The suggested construction duration shall take in considerations the verifiable lead time for all equipment.

3 DESIGN

Prepare biddable plans, technical specifications, other Bid Documents, and any associated design calculations, required to complete the Project Elements.

3.1 DS3 DELIVERABLES

- A. Meet at a 50% completion level with OC SAN staff to review design progress. Formal deliverables are not necessary. QA/QC is also not required for this preview.
- B. At this submittal, the design is essentially finished and submitted as complete. DS3 shall include all finished and checked plans and specifications. OC SAN staff will review DS3 and provide comments to the drawings and specifications. The CONSULTANT should be finished with no remaining design work except for OC SAN comments provided at DS3 review and their incorporation at FDS.
- C. [Prepare construction drawings in CAD conforming to OC SAN's CAD Manual. A CAD compliance check will be performed at DS3 (Exhibit 17, Chapter 8 explains the CAD compliance check, and Appendix D contains the "CAD Standards Compliance Checklist" summarizing all items checked by OC SAN). OC SAN will provide base layers and utilities for Work locations within the treatment plant boundaries.]

3.2 DS3 COST ESTIMATE

- A. Prepare an AACE International Class 2 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01 based on the DS3 design. Data used to prepare the cost estimate shall be included as an attachment to DS3.
- B. Prepare estimate of construction duration.

3.3 FDS DELIVERABLES

- A. Final Design Submittal (FDS) is for OC SAN to confirm all comments from DS3 have been addressed and incorporated and add any additional comments.

3.4 FTSP DOCUMENTS

- A. Final Technical Plans and Specifications is for the CONSULTANT to address and incorporate all comments and provide all necessary stamps and signatures for a complete bid package suitable for advertisement by OC SAN.

3.5 CONSTRUCTION COST ESTIMATE "ENGINEER'S ESTIMATE"

- A. 30 calendar days prior to advertisement, refresh the DS3 Class 2 cost estimate. Get updated vendor quotes used to prepare the DS3 cost estimate. This will become the Engineer's Estimate published in the front-end documents.

3.6 PERMITTING ASSISTANCE ([ALLOCATE 60 HOURS] [NOT INCLUDED IN THIS AGREEMENT])

- A. [For all applicable Project Elements of this Scope of Work, provide Bid Documents that ensure that the design complies with all conditions of existing permits and permits required to construct and implement this project. Testing, construction drawings, specifications, and supplemental drawings shall be prepared, as necessary, in the format required to obtain all permits.]
- B. Assist OC SAN in obtaining permits. This assistance shall include identifying applicable permits, completing required design, plan preparation, application forms provided by OC SAN, preparing supporting documentation for the permit applications as required by the issuing agency, furnishing the required number of copies of all construction drawings and exhibits, and attend meetings with permitting agencies at the request of OC SAN.
- C. Except for construction contractor-furnished permits, OC SAN staff will execute all applications. CONSULTANT shall determine the cost and requirements of all permits. All permit fees will be paid directly by OC SAN and will not be part of CONSULTANT's fee.
- D. Submit all supporting documentation in a timely fashion for all permits required for this project as described below.
 - 1. Caltrans Encroachment Permits

- a. Determine if encroachment permits or other types of permits are required by Caltrans for the design and construction phases. Provide the work necessary to obtain such permits including coordinating and attending meetings.

2. City/County Encroachment Permits

- a. Provide coordination, work effort, and attend meetings, as required, to obtain encroachment permits from each city and agency who has jurisdiction. Process the plans through the cities and agencies for approval, revise plans, and meet with them, as required, to obtain approval.]

3.7 BID SUPPORT SERVICES

- A. Provide answers to bidder's questions related to the design. Provide revisions to specifications and drawings when needed for addendum.
- B. Within 2 weeks of the bid opening date, prepare conformed document set (drawings, databases, specification, and other required materials) that incorporates the addenda. See requirements of OC SAN's CAD Manual.

3.8 POPULATE PMWEB LIST OF SUBMITTALS (ALLOCATE 24 HOURS)

- A. PMWeb is used to manage communication with the contractor. OC SAN uses an Excel template to populate the list of all submittals. The CONSULTANT shall review each project specification and complete the Submittal Items Template as follows:
 1. Enter the list of project specifications.
 2. Enter the list of commissioning packages. Commissioning packages are defined by Section 01810, Commissioning.
 3. Enter the following information for each submittal item.
 - a. Specification section: enter the specification section requiring the submittal.
 - b. Submittal Item description: enter the description of the submittal. Submittal items that refer to multiple specifications shall include referenced specification sections in brackets.
 - c. Comments: enter notes, comments, or clarifications. This field is optional.
 - d. Commissioning package: enter the commissioning package of the submittal item. Submittal items shall be duplicated when the same submittal is required for multiple commissioning packages. Items shall be separated into mobilization, general construction, or a commissioning package defined by the project specifications.
 - e. Phase: Identify which phase each submittal is required to be approved.
 - f. Retention: Specify if the submittal is a Project File or Facility Record based on OC SAN's Records Retention Policy.
 - g. Lead time: Specify the appropriate number of workdays that OC SAN has to review the particular submittal.
 - h. Load: Specify if the submittal should be loaded into PMWeb prior to NTP, upon contractor approval, or prior to the start of commissioning.
- B. OC SAN will provide a PMWeb Master Submittal Items template that includes the submittals required by OC SAN's Master Specifications. The CONSULTANT shall not deviate from the Master PMWeb Submittal Items, except as required by the project specific specifications. The CONSULTANT shall develop submittal items for specifications that are not part of OC SAN's Master Specifications.
- C. OC SAN will provide a 1-hour virtual training on the use of the PMWeb Master Submittal Items Template.
- D. The CONSULTANT shall populate, receive comments, address comments, and provide completed submittal form as follows:
 1. 20 workdays after advertisement date.

3.9 SAFETY AND RISK MEETING

- A. Ensure that an OC San Risk Management safety and security professional has been assigned to the project.
- B. CONSULTANT shall prepare and meet with OC San Risk Management personnel at all design stages to review Exhibit 11 Sample Full Project Safety Review Plan and Exhibit 12 Sample Risk Management Check List. This shall be completed in accordance with Exhibit 4 Risk Management Requirements.
- C. CONSULTANT shall update Exhibits 11 and 12 throughout the design phases. CONSULTANT shall provide OC San Risk Management with the final copies of Exhibit 11 and Exhibit 12 at completion of the Design Project.

4 CONSTRUCTION SERVICES

OC SAN will administer and provide field inspection for construction contracts. Construction and installation support services shall be provided by the CONSULTANT on an as-needed basis and as requested by OC SAN. The services are indicated below.

4.1 SUBMITTAL REVIEWS (ALLOCATE 15 HOURS)

- A. OC SAN will manage submittal review. The CONSULTANT shall use PMWeb to review and return comments to OC SAN. Return comments within 5 workdays.

4.2 REQUESTS FOR INFORMATION (RFIS) (ALLOCATE 15 HOURS)

- A. OC SAN will manage the processing of RFI's. When requested by OC SAN, CONSULTANT shall return written responses to OC SAN within 5 workdays of receipt of RFI using PMWeb. Generate necessary sketches, figures, and modifications to the drawings for clarifications.

4.3 PROGRESS MEETINGS AND SITE VISITS

- A. Refer to **Table 2**.

4.4 RECORD DRAWINGS

- A. Verify that the Contractor's As-Built set correctly reflects the information included in the approved shop drawings, RFIs, approved Field Change Orders, plan clarifications, plan changes, and other deviations from the conformed drawings, and that the information in the set is complete.
- B. Draft Record Drawings shall be submitted to OC SAN within 4 weeks of receipt from OC SAN of the approved Contractor's As-Built drawings. The Final Record Drawings shall be submitted within one week of receipt of OC SAN comments on the Draft Record Drawings.
- C. Prepare Draft Record Drawings based on the Final Field Markup Set for all drawings in accordance with the requirements in the CAD Manual. Submit the Draft Record Drawings to the OC SAN Resident Engineer. The Draft Record Drawings will be reviewed for content and CAD compliance by OC SAN staff. If no comments are identified, CONSULTANT shall prepare the Final Record Drawings and submit them along with the Contractor's field markup set to the Project Manager. For content and placement of record drawing stamp, see CAD Manual.
- D. Submit an electronic copy of the record drawings to OC SAN for review and approval. The acceptance of the record drawings shall be deemed a condition for completion of work.
- E. Contractor-generated drawings described in the Design Guidelines and the shop drawings will not be updated by CONSULTANT. The format and quantities for delivery of the submittals shall be listed below:

Contents	Draft Record Drawings	Final Record Drawings
All related electronic files, including CAD and compiled PDFs.	One copy to be uploaded to Microsoft Teams.	One copy to be uploaded to Microsoft Teams.

4.5 EQUIPMENT INFORMATION DATABASE (EID) (ALLOCATE [X] HOURS [NOT INCLUDED IN THIS AGREEMENT])

- A. OC SAN uses Maximo software to manage and track asset information. When new assets are added or existing assets are modified by a project, an EID Excel spreadsheet is used to populate or update Maximo asset information. CONSULTANT shall meet with OC SAN EIM staff to request an EID spreadsheet pre-populated with the new or modified assets. OC SAN staff will provide training on how to populate the EID spreadsheet. Field work will be needed to apply equipment tags and record equipment nameplate information and serial numbers to populate the EID. Coordinate with Maintenance Specialists (David Haug or designee, Div. 870) to walk new facilities to verify accuracy of P&IDs and EID.

4.6 [UPDATE BASELINE DRAWINGS]

5 STAFF ASSISTANCE

OC SAN staff member or designee assigned to work with CONSULTANT on the design of this project is Jessica Cheung. Phone (714) 593-7147, e-mail jcheung@ocsan.gov.

6 EXHIBITS

- A. Exhibits 1-3, 5-10 – Not Used
- B. Exhibit 4 – Risk Management Requirements
- C. Exhibit 11 – Sample Full Project Safety Review Plan
- D. Exhibit 12 – Sample Risk Management Checklist
- E. Exhibit 13 – Project Reference Material
 - a. 13.1 – Photos
 - b. 13.2 – Plant 1 Plant Water System Map
 - c. 13.3 – Proposed Design Idea (The CONSULTANT may start with this conceptual design.)
 - d. 13.4 – Proposed Valve Cans (The CONSULTANT may start with this conceptual design.)
 - e. 13.5 – Record Drawings (Available Upon Request)
 - (1) P1-82, Activated Sludge Plant Rehabilitation (2005)
 - (2) P1-36-2, Secondary Treatment Improvements at Plant No. 1 (1995)
 - (3) P1-16, 46 MGD Activated Sludge Plant at Reclamation Plant No. 1 (1973)
 - (4) P1-102, Secondary Activated Sludge Facility 2 at Plant No.1 (2006)
- F. Exhibit 14 – BlueBeam Designer Training for Submission
- G. Exhibit 15 – BlueBeam Designer User Training
- H. Exhibit 16 – Spec Review using Microsoft Word and Teams
- I. Exhibit 17 – [CAD Standard Manual](#)
- J. Exhibit 18 – PMWeb

JC:tk

PROFESSIONAL DESIGN SERVICES AGREEMENT

This PROFESSIONAL DESIGN SERVICES AGREEMENT (Agreement), to be effective this 1st day of July, 2024, is made and entered into by and between:

ORANGE COUNTY SANITATION DISTRICT
hereinafter referred to as "OC San"

AND

STANTEC CONSULTING SERVICES, INC.
hereinafter referred to as "CONSULTANT"

individually referred to as the "Party" and collectively as the "Parties".

RECITALS

WHEREAS, in accordance with Ordinance No. OC SAN-61 and pursuant to a Request for Qualifications ("Underlying RFQ"), the Board of Directors of OC San, by action on May 22, 2024, approved the award of the Agreement for **CONTRACT NO. FE24-00-15**, to CONSULTANT to provide services for selected projects on a task order (Task Order) basis from July 1, 2024 to June 30, 2027; and

WHEREAS, consistent with the Underlying RFQ, the CONSULTANT has been prequalified to perform services for the following project types: Project Type 1: Site Works, Building and Safety, Project Type 2: Linear and Collections, and Project Type 3: Process, Electrical and Instrumentation & Control (I&C); and

WHEREAS, for Task Orders estimated to cost \$100,000 or less, the Director of Engineering, with concurrence of the Purchasing Manager, may solicit a proposal from one (1) firm on the prequalified list, which will include the project types for which the consultants are prequalified; and

WHEREAS, the CONSULTANT is qualified to provide and has agreed to provide the necessary professional engineering and related services under this Agreement; and

WHEREAS, by this Agreement, the Parties intend to set forth the general terms and conditions that will apply to any specific project for which CONSULTANT is given a Task Order by OC San.

NOW, THEREFORE, OC San and the CONSULTANT mutually agree as follows:

SECTION 1. SCOPE OF AGREEMENT

OC San, at its sole discretion, may, from time to time during the term of this Agreement, issue a Request for Task Order Proposal ("RFTOP") setting forth the detailed requirements and scope of work to be performed on the identified project and thereafter, upon receipt of a proposal from the CONSULTANT, may issue a Task Order to proceed with the work. The scope of work will be in a form attached hereto as Attachment "A" – Sample Scope of Work.

Upon execution by OC San, the Task Order shall become an operative part of this Agreement. Should any conflict or inconsistency exist in the contract documents identified in this section, the conflict or inconsistency shall be resolved by applying the provisions in the highest priority document, which shall be determined in the following order of priority:

1. Agreement and any amendments thereto
2. the Task Order
3. the RFTOP

SECTION 2. TASK ORDER ISSUANCE BY OC SAN

The Task Order issued by OC San shall, specifically or by reference to the RFTOP and corresponding proposal, set forth the terms that will apply to the specific project for which the services will be rendered. Those terms shall include, but not be limited to, scope of work, time for performance, and compensation.

SECTION 3. TERM

This Agreement shall commence on the effective date of this Agreement and terminate on June 30, 2027, unless further extended by written agreement signed by the Parties. Any work that is required by a Task Order and is not finished by the date of termination shall be continued and completed by the CONSULTANT and the terms and conditions of this Agreement shall continue in effect for that time. OC San may, at its option, renew this Agreement for two (2) additional terms of one (1) year each, for a maximum contract duration of five (5) years.

SECTION 4. COMPENSATION

The total compensation payable to the CONSULTANT pursuant to this Agreement shall not exceed One Million Dollars (\$1,000,000) per year in accordance with the terms described in SECTION 3 - TERM. The compensation includes, but is not limited to, fees for professional engineering services based on the CONSULTANT's burdened labor rates, overhead, and profit, and fees from the CONSULTANT's subconsultants/subcontractors (Subconsultants/Subcontractors). The specific amount of compensation payable to the CONSULTANT for services rendered on an individual project, pursuant to a Task Order, shall be established for each Task Order and shall not exceed Five Hundred Thousand Dollars (\$500,000) per individual Task Order unless authorized by OC San's Board of Directors. The CONSULTANT agrees and acknowledges that the execution of this Agreement does not in any way guarantee that a Task Order will be issued to the CONSULTANT. Moreover, execution of this Agreement shall not entitle the CONSULTANT to any form of payment or compensation from OC San without OC San first having issued a written Task Order.

A. Total Compensation

Total compensation for any Task Order shall not exceed the amount indicated in the approved Task Order and any approved amendments thereto.

B. Labor

As a portion of the total compensation to be paid to CONSULTANT, OC San shall pay to CONSULTANT a sum equal to the burdened salaries (salaries plus benefits) actually paid

by CONSULTANT charged on an hourly-rate basis to the project and paid to CONSULTANT's personnel. For each Task Order, the cost of benefits for CONSULTANT shall be based on the fringe rates identified in Attachment "E" – Rates Proposal. Upon request of OC San, CONSULTANT shall provide OC San with certified payroll records of all employees' work that is charged to the project.

C. Overhead

As a portion of the total compensation to be paid to CONSULTANT, for each Task Order, OC San shall compensate CONSULTANT for overhead at the rates equal to the percentage of burdened labor as specified in Attachment "E" – Rates Proposal.

D. Profit

For each Task Order, profit shall be ten percent (10%) of burdened labor and overhead for all CONSULTANT fees and its Major Subconsultants (Architecture & Engineering [A&E] consulting services) whose fees for services are greater than or equal to \$100,000. Profit shall remain fixed through the term of this Agreement, inclusive of any renewals identified in Section 3 – TERM.

As a portion of the total compensation to be paid to CONSULTANT and its Major Subconsultants, OC San shall pay profit for all services rendered by CONSULTANT and its Major Subconsultants for the Task Order as specified in the previous paragraph.

E. Subconsultants

For each Task Order, any Minor Subconsultant (A&E consulting services) whose fees for services are less than \$100,000 and any Subconsultant/Subcontractor (non-A&E consulting services), CONSULTANT shall pay to Subconsultant/Subcontractor total compensation based on an established hourly rate schedule by personnel classification. The hourly rates shall cover burdened salary costs, overhead and profit. The compensation for each Minor Subconsultants and Subconsultants/Subcontractors (non-A&E consulting services), including both labor related fees, and direct costs shall not exceed the amount, as negotiated prior to award of a Task Order.

For each Task Order, any Major Subconsultant (A&E consulting services) whose fees for services are greater than or equal to \$100,000, total compensation for labor will be based on burdened labor rates, overhead, and profit, as negotiated prior to award of Task Order. Prior to award of Task Order, the CONSULTANT shall provide to OC San, if available, an audit performed for another public agency which documents the Major Subconsultant's labor burden rate and overhead rate. This audit shall be the most current available and have been conducted for a period that ended within twelve months of the task order proposal due date. This information shall be provided by CONSULTANT within ten (10) business days from request by OC San.

F. Direct Costs

OC San shall reimburse CONSULTANT and its Subconsultants/Subcontractors the actual costs of permits and associated fees, travel, licenses, and other services in an amount not to exceed the sums set forth in each approved Task Order. OC San shall also pay to CONSULTANT actual costs for equipment rentals, leases or purchases with prior written

approval of OC San. Upon request, CONSULTANT shall provide to OC San receipts and other documentary records to support CONSULTANT's request for reimbursement of these amounts, refer to Attachment "D" – Allowable Direct Costs. All incidental expenses shall be included in the overhead cost pursuant to this SECTION 4 – COMPENSATION.

G. Other Direct Costs

OC San will reimburse the CONSULTANT for Other Direct Costs incurred by CONSULTANT and its Subconsultants/Subcontractors due to modifications in the scope of work resulting from field investigations and field work required by the Task Order. These items may include special equipment, test equipment and tooling, and other materials and services not previously identified. Refer to Attachment "D" – Allowable Direct Costs for payment information.

H. Reimbursable Direct Costs

OC San will reimburse the CONSULTANT for reasonable travel and business expenses as described in this section and further described in Attachment "D" – Allowable Direct Costs. The reimbursement of the above-mentioned expenses will be based on an "accountable plan" as considered by the Internal Revenue Service (IRS). The plan includes a combination of reimbursements based upon receipts and a "per diem" component approved by the IRS. The most recent schedule of the per diem rates utilized by OC San may be found on the U.S. General Services Administration website at <https://www.gsa.gov/travel/plan-book/per-diem-rates>.

The CONSULTANT shall be responsible for the most economical and practical means of management of reimbursable costs inclusive, but not limited to, travel, lodging, and meals arrangements. OC San shall apply the most economic and practical method of reimbursement which may include reimbursements based upon receipts and/or "per diem" as deemed the most practical.

CONSULTANT shall be responsible for returning to OC San any excess reimbursements after the reimbursement has been paid by OC San.

Travel and travel arrangements – Any travel involving airfare, overnight stays, or multiple day attendance must be approved by OC San in advance.

Local travel is considered travel by the CONSULTANT within OC San general geographical area which includes Orange, Los Angeles, Ventura, San Bernardino, Riverside, San Diego, Imperial, and Kern Counties. Automobile mileage is reimbursable if CONSULTANT is required to utilize a personal vehicle for local travel.

Lodging – Overnight stays will not be approved by OC San for local travel. However, under certain circumstances overnight stay may be allowed at the discretion of OC San based on reasonableness of meeting schedules and the amount of time required for travel by the CONSULTANT. Such determination will be made on a case-by-case basis and at the discretion of OC San.

Travel Meals – Per diem rates as approved by the IRS shall be utilized for travel meals reimbursements. Per diem rates shall be applied to meals that are appropriate for travel times. Receipts are not required for the approved meals.

Additional details related to the reimbursement of the allowable direct costs are provided in Attachment "D" – Allowable Direct Costs.

I. Limitation of Costs

If, at any time, CONSULTANT estimates the cost of performing the services described in CONSULTANT's proposal will exceed seventy-five percent (75%) of the not to exceed amount of the Task Order, including any approved additional compensation, CONSULTANT shall notify OC San immediately, in writing. The written notice shall indicate the additional amount necessary to complete the services. Any cost incurred in excess of the approved not to exceed amount, without the express written consent of OC San's authorized representative, shall be at CONSULTANT's own risk. This written notice shall be provided separately from, and in addition to, any notification requirements contained in the CONSULTANT's invoice and monthly progress report. Failure to notify OC San that the services cannot be completed within the authorized not to exceed amount of a Task Order is a material breach of this Agreement.

J. Method of Payment:

The CONSULTANT shall submit for approval by OC San, monthly invoices based on the total services which have been satisfactorily completed and specifying a percentage of completion. The CONSULTANT's billings shall be certified for payment by OC San only after OC San has determined that the CONSULTANT has completed each applicable project task.

CONSULTANT shall submit separate invoices for each Task Order on a monthly basis.

CONSULTANT understands that submitted costs are subject to Section 11 - AUDIT PROVISIONS, below.

K. Task Order Completion

Upon satisfactory completion by CONSULTANT of the work called for under the terms of the Task Order and upon acceptance of such work by OC San, CONSULTANT will be paid the unpaid balance of any money due for such work.

Upon satisfactory completion of the work performed under each Task Order and prior to final payment under each Task Order for such work or prior settlement upon termination of this Agreement, and as a condition precedent thereto, CONSULTANT shall execute and deliver to OC San a release of all claims against OC San arising under or by virtue of this Agreement other than such claims, if any, as may be specifically exempted by CONSULTANT from the operation of the release in stated amounts to be set forth therein.

L. False Claims

Pursuant to the California False Claims Act (Government Code Sections 12650-12655), any CONSULTANT that knowingly submits a false claim to OC San for compensation under the terms of this Agreement may be held liable for treble damages and up to a Ten Thousand Dollars (\$10,000) civil penalty for each false claim submitted. This section shall also be binding on all Subconsultants/Subcontractors.

The CONSULTANT or its Subconsultants/Subcontractors shall be deemed to have submitted a false claim when the CONSULTANT or its Subconsultants/Subcontractors: (a) knowingly presents or causes to be presented to an officer or employee of OC San a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by OC San; (c) conspires to defraud OC San by getting a false claim allowed or paid by OC San; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to OC San; or (e) is a beneficiary of an inadvertent submission of a false claim to OC San and fails to disclose the false claim to OC San within a reasonable time after discovery of the false claim.

M. California Department of Industrial Relations (DIR) Registration and Record of Wages:

To the extent the CONSULTANT's employees and/or its Subconsultants/Subcontractors who will perform work during the design, preconstruction, and construction phases of a construction contract for which Prevailing Wage Determinations have been issued by the DIR and as more specifically defined under Labor Code Section 1720 et seq., CONSULTANT and its Subconsultants/Subcontractors shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4, the work is subject to compliance monitoring and enforcement by the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776 and shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Penalties for non-compliance with the requirements of Labor Code section 1776 may be deducted from progress payments per Labor Code section 1776.

Pursuant to Labor Code section 1776, the CONSULTANT and its Subconsultants/Subcontractors shall furnish a copy of all certified payroll records to OC San and/or general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the DIR.

The CONSULTANT and its Subconsultants/Subcontractors shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 16461(e).

N. Record of Expenses:

The CONSULTANT shall keep complete and accurate records of all costs and expenses incidental to services covered by this Agreement. Such records will be made available to OC San upon request.

O. Reallocation of Total Compensation:

OC San, by its Director of Engineering, shall have the right to approve a reallocation of the incremental amounts constituting the total compensation payable under the Task Order, provided that the total compensation for the Task Order is not increased.

SECTION 5. LIMITATIONS UPON SUBCONTRACTING AND ASSIGNMENT

The CONSULTANT shall not contract with any other person or entity to perform the services required without the written approval of OC San. This Agreement may not be assigned voluntarily or by operation of law without the prior written approval of OC San. If the CONSULTANT is permitted to subcontract any part of this Agreement by OC San, the CONSULTANT shall be responsible to OC San for the acts and omissions of its Subconsultant/Subcontractor, as it is for persons directly employed by the CONSULTANT. Nothing contained in this Agreement shall create any contractual relationship between any Subconsultant/Subcontractor and OC San. All persons engaged in the work will be considered employees of the CONSULTANT. OC San will deal directly with and will make all payments to the CONSULTANT.

SECTION 6. CHANGES TO SCOPE OF WORK

In the event of a change in the scope of work as requested by OC San or any other changes to the Task Order, the Parties shall execute an amendment to the Task Order setting forth with particularity all new terms of the Task Order, including, but not limited to, any additional compensation.

SECTION 7. DOCUMENT OWNERSHIP – CONSULTANT PERFORMANCE

A. All documents in all forms (electronic, paper, etc.), including, but not limited to, studies, sketches, drawings, computer printouts, disk files, and electronic copies prepared in connection with or related to the scope of work shall be the property of OC San. OC San's ownership of these documents includes use of, reproduction or reuse of, and all incidental rights, whether or not the work for which they were prepared has been performed. OC San's ownership entitlement arises upon payment or any partial payment for work performed and includes ownership of any and all work product completed prior to that payment. This section shall apply whether the CONSULTANT's services are satisfied by the completion of the Agreement or are terminated in accordance with other provisions of this Agreement. Notwithstanding any other provision of this section or Agreement, the CONSULTANT shall have the right to make copies of all such plans, studies, sketches, drawings, computer printouts and disk files, and specifications.

B. CONSULTANT shall not be responsible for damage caused by subsequent changes to or uses of the deliverables where the subsequent changes or uses are not authorized or approved by CONSULTANT, provided that the service rendered by CONSULTANT was not a proximate cause of the damage.

C. Copies of Work Product

Upon completion of the work required for each Task Order, the CONSULTANT shall deliver to OC San the number of copies specified in the specific Task Order scope of work of the final report containing the CONSULTANT's findings, conclusions, recommendations, and all supporting documentation and/or final design drawings and specifications. Each Task Order will define the requirements for the deliverables.

SECTION 8. INSURANCE

A. General:

- i. Insurance shall be issued and underwritten by insurance companies acceptable to OC San.
- ii. Insurers must have an "A-" Policyholder's Rating, or better, and Financial Rating of at least Class VIII, or better, in accordance with the most current A.M. Best's Guide Rating. However, OC San will accept State Compensation Insurance Fund for the required policy of Worker's Compensation Insurance subject to OC San's option to require a change in insurer in the event the State Fund financial rating is decreased below "B". Further, OC San will require CONSULTANT to substitute any insurer whose rating drops below the levels herein specified. Said substitution shall occur within twenty (20) days of written notice to CONSULTANT by OC San or its agent.
- iii. Coverage shall be in effect prior to the commencement of any work under this Agreement.

B. General Liability:

The CONSULTANT shall maintain during the life of this Agreement, including the period of warranty, Commercial General Liability Insurance written on an occurrence basis providing the following minimum limits of liability coverage: Two Million Dollars (\$2,000,000) per occurrence with Four Million Dollars (\$4,000,000) aggregate. If aggregate limits apply separately to this Agreement (as evidenced by submission of ISO form CG 25 03 or CG 25 04), then the aggregate limit may be equivalent to the per occurrence limit. Said insurance shall include coverage for the following hazards: Premises-Operations, blanket contractual liability (for this Agreement), products liability/completed operations (including any product manufactured or assembled), broad form property damage, blanket contractual liability, independent contractors liability, personal and advertising injury, mobile equipment, owners and contractors protective liability, and cross liability and severability of interest clauses. A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement(s). If requested by OC San and applicable, XCU coverage (Explosion, Collapse and Underground) and Riggers/On Hook Liability must be included in the General Liability policy and coverage must be reflected on the submitted Certificate of Insurance.

C. Umbrella Excess Liability:

The minimum limits of general liability and automobile liability insurance required, as set forth herein, shall be provided for through either a single policy of primary insurance or a combination of policies of primary and umbrella excess coverage. Umbrella excess liability coverage shall be issued with limits of liability which, when combined with the primary insurance, will equal the minimum limits for general liability and automobile liability.

D. Automobile/Vehicle Liability Insurance:

The CONSULTANT shall maintain a policy of automobile liability insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and other vehicles providing the following minimum limit of liability coverage: combined single limit of One Million Dollars (\$1,000,000). A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement.

E. Drone Liability Insurance:

If a drone will be used, drone liability insurance must be maintained by the CONSULTANT in the amount of One Million Dollars (\$1,000,000) in a form acceptable to OC San.

F. Worker's Compensation Insurance:

The CONSULTANT shall provide such Workers' Compensation Insurance as required by the Labor Code of the State of California in the amount of the statutory limit, including Employer's Liability Insurance with a minimum limit of One Million Dollars (\$1,000,000) per occurrence. Such Worker's Compensation Insurance shall be endorsed to provide for a waiver of subrogation in favor of OC San. A statement on an insurance certificate will not be accepted in lieu of the actual endorsements unless the insurance carrier is the State of California Insurance Fund and the identifier "SCIF" and applicable endorsements are referenced on the certificate of insurance. If an exposure to Jones Act liability may exist, the insurance required herein shall include coverage for Jones Act claims.

G. Errors and Omissions/Professional Liability:

The CONSULTANT shall maintain in full force and effect, throughout the term of this Agreement, standard industry form professional liability/errors and omissions insurance coverage with coverage limits of not less than Two Million Dollars (\$2,000,000) in accordance with the provisions of this paragraph. If the policy of insurance is written on a "claims made" basis, said policy shall be continued in full force and effect at all times during the term of this Agreement and for a period of five (5) years from the date of the completion of the services hereunder.

In the event of termination of said policy during this period, the CONSULTANT shall obtain continuing insurance coverage for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement. Said coverage shall be evidenced by either a new policy evidencing no gap in coverage or by separate extended "tail" coverage with the present or new carrier.

In the event the present policy of insurance is written on an "occurrence" basis, said policy shall be continued in full force and effect during the term of this Agreement or until completion of the services provided for in this Agreement, whichever is later. In the event of termination of said policy during this period, new coverage shall be obtained for the required period to insure for the prior acts or omissions of the CONSULTANT during the course of performing services under the terms of this Agreement.

The CONSULTANT shall provide to OC San a certificate of insurance in a form acceptable to OC San indicating the deductible or self-retention amounts and the expiration date of said policy and shall provide renewal certificates not less than ten (10) days prior to the expiration of each policy term.

H. Proof of Coverage:

The CONSULTANT shall furnish OC San with original certificates and amendatory endorsements effecting coverage. Said policies and endorsements shall conform to the requirements herein stated. All certificates and endorsements must be received and accepted by OC San before work commences. OC San reserves the right to require, at any time, complete, certified copies of all required insurance policies, including endorsements, effecting the coverage required. The following are approved forms that must be submitted as proof of coverage:

- | | |
|--|--|
| • Certificate of Insurance | ACORD Form 25 or other equivalent Certificate of Insurance form |
| • Additional Insurance (General Liability) | The combination of (ISO Forms) CG 2010 <u>and</u> CG 2037 |
| | All other additional insured endorsements must be submitted for approval by OC San and OC San may reject alternatives that provide different or less coverage to OC San. |
| • Additional Insured (Auto Liability) | Submit Endorsement provided by carrier for OC San's approval. |
| • Waiver of Subrogation | Submit workers' compensation waiver of subrogation endorsement provided by carrier for OC San's approval. |
| • Cancellation Notice | No endorsement is required. However, Vendor/Contractor is responsible for notifying OC San of any pending or actual insurance policy cancellation, as described in Article I. Cancellation and Policy Change Notice below. |

I. Cancellation and Policy Change Notice:

The CONSULTANT is required to notify OC San in writing of any insurance cancellation notice it receives or other knowledge of pending or actual insurance policy cancellation, within two (2) working days of receipt of such notice or acquisition of such knowledge. Additionally, the CONSULTANT is required to notify OC San in writing of any change in the terms of insurance, including reduction in coverage or increase in deductible/SIR, within two (2) working days of receipt of such notice or knowledge of same.

Said notices shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Contracts, Purchasing & Materials Management Division

J. Primary Insurance:

All liability policies shall contain a Primary and Non-Contributory Clause. Any other insurance maintained by OC San shall be excess and not contributing with the insurance provided by the CONSULTANT.

K. Separation of Insured:

All liability policies shall contain a "Separation of Insureds" clause.

L. Non-Limiting (if applicable):

Nothing in this document shall be construed as limiting in any way, nor shall it limit the indemnification provision contained in this Agreement or the extent to which the CONSULTANT may be held responsible for payment of damages to persons or property.

M. Deductibles and Self-Insured Retentions:

Any deductible and/or self-insured retention must be declared to OC San on the Certificate of Insurance. All deductibles and/or self-insured retentions require acceptance by OC San. At the option of OC San, either: a) the insurer shall reduce or eliminate such deductible or self-insured retention as respects OC San or b) the CONSULTANT shall provide a financial guarantee satisfactory to OC San guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

N. Defense Costs:

Liability policies shall have a provision that defense costs for all insureds and additional insureds are paid in addition to and do not deplete any policy limits.

O. Subconsultants/Subcontractors:

The CONSULTANT shall be responsible to establish insurance requirements for Subconsultants/Subcontractors hired by the CONSULTANT. The insurance shall be in amounts and types reasonably sufficient to deal with the risk of loss involving the Subconsultants'/Subcontractors' operations and work.

P. Limits Are Minimums:

If the CONSULTANT maintains higher limits than any minimums shown above, then OC San requires and shall be entitled to coverage for the higher limits maintained by the CONSULTANT.

SECTION 9. PROJECT TEAM AND SUBCONSULTANTS

CONSULTANT shall provide to OC San, prior to execution of a Task Order, the names and full descriptions of all Subconsultants/Subcontractors and CONSULTANT's project team members anticipated to be used in performing work under a Task Order. In its proposal, CONSULTANT shall include a description of the work and services to be performed by each Subconsultant/Subcontractor and each of CONSULTANT's project team members. CONSULTANT shall include the respective compensation amounts for CONSULTANT and each Subconsultant/Subcontractor broken down as indicated in Section 4 – COMPENSATION, above.

There shall be no substitution of the listed Subconsultants/Subcontractors and CONSULTANT's project team members without prior written approval by OC San.

SECTION 10. ENGINEERING REGISTRATION

The CONSULTANT's personnel and its Subconsultants/Subcontractors shall be comprised of registered engineers and a staff of specialists and draftsmen in each department. The firm itself is not a registered engineer but represents and agrees that when the performance of this Agreement requires the services of a registered engineer, such services hereunder will be performed under the direct supervision of registered engineers who are registered in the State of California.

SECTION 11. AUDIT PROVISIONS

- A. OC San retains the reasonable right to access, review, examine, and audit any and all books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify that the CONSULTANT is in compliance with all the requirements under this Agreement. The CONSULTANT shall include OC San's right as described above in any and all of their subcontracts and shall ensure that these rights are binding upon all its Subconsultants/Subcontractors.
- B. OC San retains the right to examine CONSULTANT's books, records, documents, and any other evidence of procedures and practices that OC San determines are necessary to discover and verify all direct and indirect costs, of whatever nature, which are claimed to have been incurred, or anticipated to be incurred, or to ensure CONSULTANT's compliance with all the requirements under this Agreement during the term of this Agreement and for a period of three (3) years after expiration or earlier termination of the Agreement.
- C. The CONSULTANT shall maintain complete and accurate records in accordance with generally accepted industry standard practices and OC San's policy. The CONSULTANT shall make available to OC San for review and audit all project-related accounting records and documents and any other financial data within fifteen (15) days after receipt of notice from OC San. Upon OC San's request, the CONSULTANT shall submit exact duplicates of originals of all requested records to OC San. If an audit is performed, the CONSULTANT shall ensure that a qualified employee of the CONSULTANT will be available to assist OC San's auditor in obtaining all project related accounting records and documents and any other financial data.

SECTION 12. LEGAL RELATIONSHIP BETWEEN PARTIES

The legal relationship between the Parties is that of an independent contractor and nothing herein shall be deemed to transform the CONSULTANT, its staff, independent contractors, or its Subconsultants/Subcontractors, into agents or employees of OC San and shall obtain no rights to any benefits which accrue to OC San's employees. CONSULTANT's staff performing services under the Agreement shall at all times be employees and/or independent contractors of the CONSULTANT. The CONSULTANT shall monitor and control its staff and wages, salaries, and other amounts due directly to its staff in connection with the Agreement. The CONSULTANT shall be responsible for hiring, review, and termination of its staff and shall be accountable for all reports and obligations respecting them, such as social security, income tax withholding, unemployment compensation, workers' compensation insurance, and similar matters.

SECTION 13. NOTICES

All notices hereunder and communications regarding the interpretation of the terms of this Agreement, or changes thereto, shall be effected by delivery of said notices in person or by depositing said notices in the U.S. mail, registered or certified mail, return receipt requested, postage prepaid.

Notice shall be mailed to OC San at:

Orange County Sanitation District
10844 Ellis Avenue, Fountain Valley, CA 92708
Attention: Ludwig Lapus, Principal Contracts Administrator
Copy: Daniel Berokoff, Engineering Supervisor

Notice shall be mailed to CONSULTANT at:

Stantec Consulting Services, Inc.
38 Technology Drive, Suite 200
Irvine, CA 92618
Attention: Patrick Stahl

All communication regarding the Task Order will be addressed to the Project Manager. Direction from other OC San staff must be approved in writing by OC San's Project Manager prior to action from the CONSULTANT.

SECTION 14. TERMINATION

OC San may terminate this Agreement at any time, without cause, upon giving thirty (30) days written notice to the CONSULTANT. In the event of such termination, the CONSULTANT shall be entitled to compensation for work performed on a prorated basis through and including the effective date of termination.

The CONSULTANT shall be permitted to terminate this Agreement upon thirty (30) days written notice only if the CONSULTANT is not compensated for billed amounts in accordance with the provisions of this Agreement when the same are due. Notice of termination shall be mailed to OC San at the address listed in Section 13 – NOTICES, above.

SECTION 15. COMPLIANCE

The CONSULTANT certifies by the execution of this Agreement that it pays employees not less than the minimum wage as defined by law and that it does not discriminate in its employment with regard to race, color, religion, sex, or national origin; that it is in compliance with all Federal, State, and local directives and executive orders regarding non-discrimination in employment; and that it agrees to demonstrate positively and aggressively the principle of equal opportunity in employment.

The CONSULTANT shall comply with all applicable laws, ordinances, codes, and regulations of Federal, State, and local government in all aspects related to this Agreement and any work completed for OC San.

SECTION 16. AGREEMENT EXECUTION AUTHORIZATION

Both OC San and the CONSULTANT do covenant that each individual executing this document by and on behalf of each Party is a person duly authorized to execute this Agreement for that Party.

SECTION 17. DISPUTE RESOLUTION

In the event of a dispute arising between the Parties regarding performance or interpretation of this Agreement, the dispute shall be resolved by binding arbitration under the auspices of the Judicial Arbitration and Mediation Service ("JAMS"), or similar organization or entity conducting alternate dispute resolution services.

SECTION 18. ATTORNEY'S FEES, COSTS, AND NECESSARY DISBURSEMENTS

If any action at law or inequity or if any proceeding in the form of an Alternative Dispute Resolution is necessary to enforce or interpret the terms of this Agreement, the prevailing Party shall be entitled to reasonable attorney's fees, costs and necessary disbursements in addition to any other relief to which it may be entitled.

SECTION 19. WARRANTY

CONSULTANT shall perform its services in accordance with generally accepted industry and professional standards. If, within the 12-month period following completion of its services, OC San informs the CONSULTANT that any part of the services fails to meet those standards, the CONSULTANT shall, within the time prescribed by OC San, take all such actions as are necessary to correct or complete the noted deficiency(ies).

SECTION 20. INDEMNIFICATION

To the fullest extent permitted by law, the CONSULTANT shall indemnify, defend (at the CONSULTANT's sole cost and expense and with legal counsel approved by OC San, which approval shall not be unreasonably withheld), protect and hold harmless OC San and all of OC San's officers, directors, employees, consultants, and agents (collectively the "Indemnified Parties"), from and against any and all claims, damages, liabilities, causes of action, suits, arbitration awards, losses, judgments, fines, penalties, costs, and expenses (including, without limitation, attorneys' fees, disbursements and court costs, and all other

professional, expert, or CONSULTANT's fees and costs, and OC San's general and administrative expenses) individually, a "Claim" and collectively, "Claims", which may arise from or are in any manner related, directly or indirectly, to any work performed or any operations, activities, or services provided by the CONSULTANT in carrying out its obligations under this Agreement to the extent of the negligent, recklessness, and/or willful misconduct of the CONSULTANT, its principals, officers, agents, employees, CONSULTANT's suppliers, Subconsultants, Subcontractors, and/or anyone employed directly or indirectly by any of them, regardless of any contributing negligence or strict liability of an Indemnified Party. Notwithstanding the foregoing, nothing herein shall be construed to require the CONSULTANT to indemnify the Indemnified Parties from any Claim arising solely from:

- (A) the active negligence or willful misconduct of the Indemnified Parties; or
- (B) a natural disaster or other act of God, such as an earthquake; or
- (C) the independent action of a third party who is neither one of the Indemnified Parties nor the CONSULTANT, nor its principal, officer, agent, employee, nor the CONSULTANT's supplier, Subconsultant, Subcontractor, nor anyone employed directly or indirectly by any of them.

Exceptions (A) through (B) above shall not apply, and the CONSULTANT shall, to the fullest extent permitted by law, indemnify the Indemnified Parties from Claims arising from more than one cause if any such cause taken alone would otherwise result in the obligation to indemnify hereunder.

The CONSULTANT's liability for indemnification hereunder is in addition to any liability the CONSULTANT may have to OC San for a breach by the CONSULTANT of any of the provisions of this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit the CONSULTANT's indemnification obligation or other liability hereunder. The terms of this Agreement are contractual and the result of negotiation between the Parties. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code section 1654) that ambiguities are to be construed against the drafting Party shall not be employed in the interpretation of this Agreement.

SECTION 21. DUTY TO DEFEND

The duty to defend hereunder is wholly independent of and separate from the duty to indemnify and such duty to defend shall exist regardless of any ultimate liability of the CONSULTANT and shall be consistent with Civil Code section 2782.8. Such defense obligation shall arise immediately upon presentation of a Claim by any person if, without regard to the merit of the Claim, such Claim could potentially result in an obligation to indemnify one or more Indemnified Parties and upon written notice of such Claim being provided to the CONSULTANT. Payment to the CONSULTANT by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition precedent to enforcing such Indemnified Party's rights to indemnification hereunder. In the event a final judgment, arbitration, award, order, settlement, or other final resolution expressly determines that the Claim did not arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONSULTANT, to any extent, then OC San will reimburse the CONSULTANT for the reasonable costs of defending the Indemnified Parties against such Claims.

The CONSULTANT's indemnification obligation hereunder shall survive the expiration or earlier termination of this Agreement until such time as action against the Indemnified Parties for such matter indemnified hereunder is fully and finally barred by the applicable statute of limitations.

SECTION 22. COMPLIANCE WITH OC SAN POLICIES AND PROCEDURES

The CONSULTANT shall be required to comply with all OC San policies and procedures. OC San requires the CONSULTANT and its Subconsultants/Subcontractors to follow and ensure their employees follow all Federal, State, and local regulations as well as OC San's safety standards while working at OC San locations. If during the course of the contract it is discovered that OC San's safety standards do not comply with Federal, State, or local regulations, then the CONSULTANT is required to follow the most stringent regulatory requirement at no additional cost to OC San. The CONSULTANT and all of its employees and Subconsultants/Subcontractors shall adhere to all applicable Contractor Safety Standards attached hereto as Attachment "L".

SECTION 23. GOVERNING LAW

This Agreement shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in Orange County in the event any action is brought in connection with this Agreement or the performance thereof.

SECTION 24. TIME OF ESSENCE

Time is of the essence in the performance of this Agreement.

SECTION 25. CONFLICT OF INTEREST

The CONSULTANT covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of the services contemplated by this Agreement. No person having such interest shall be employed by or associated with the CONSULTANT.

SECTION 26. ENTIRE AGREEMENT

This Agreement constitutes the entire understanding and agreement between the Parties and supersedes all previous negotiations between them pertaining to the subject matter hereof.

[THIS SECTION INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, this Agreement has been executed in the name of OC San and the CONSULTANT by their respective duly authorized officers, as of the date first written above.

STANTEC CONSULTING SERVICES, INC.

By _____ Date _____

Printed Name & Title

ORANGE COUNTY SANITATION DISTRICT

By _____ Date _____
Chad P. Wanke
Board Chairman

By _____ Date _____
Kelly A. Lore
Clerk of the Board

By _____ Date _____
Ruth Zintzun
Finance & Procurement Manager

Attachments: Attachment "A" Sample Scope of Work
Attachment "B" Not Used
Attachment "C" Not Used
Attachment "D" Allowable Direct Costs
Attachment "E" Rates Proposal
Attachment "F" Not Used
Attachment "G" Not Used
Attachment "H" Not Used
Attachment "I" Not Used
Attachment "J" Not Used
Attachment "K" Not Used
Attachment "L" Contractor Safety Standards
Attachment "M" Iran Contracting Act Verification

ATTACHMENT “A”

SAMPLE SCOPE OF WORK

ATTACHMENT "A"

SAMPLE SCOPE OF WORK DESCRIPTION

OC SAN staff will develop detailed scope of work to be included in each Request for Task Order Proposal (RFTOP). The RFTOP will require Consultants to base their proposals on the scope of work included in the RFTOP. The remainder of this document are the templates typically used for design projects. Notes to scope editor are shown, although they will be removed before a scope of work is included in a RFTOP. Yellow highlighted text indicates where project specific information or a hypothetical example is given.

Design Task Order

Attachment A - Scope of Work

1 PROJECT REQUIREMENTS

Provide professional design engineering services for the project described herein.

1.1 BACKGROUND

- A. The Secondary Clarifiers at Plant No. 1 were constructed under Project Nos. P1-16 (1973), P1-36-2 (1995), and P1-82 (2005). A buried ductile iron plant water line around the secondary clarifiers feeds the scum sprayers and hose bibs. Because the plant water chemical composition is so corrosive to ductile iron, many failures have occurred.

1.2 GENERAL PROJECT DESCRIPTION

- A. This project includes the replacement of approximately 1800 feet of existing 6-inch ductile iron buried plant water piping, valves, fittings, and connections.
- B. A location map is provided in **Figure 1**.

[insert location map]

Figure 1 - Project Location Map

1.3 PROJECT ELEMENTS

- A. **Element 1: Piping** – Replace the existing 1,800 feet of 6-inch buried ductile iron plant water piping with new 6-inch plant water piping.
- B. Assumptions for level of effort:
1. 1,600 feet of piping shall be below grade and 200 feet shall be either above or below grade.
 - a. 1,600 feet of piping is located around the Secondary Clarifiers. Assume high-density polyethylene (HDPE) as the pipe material with appropriate dimension ratio value.
 - b. 200 feet of piping will re-route the existing plant water line on the northwest end of the Secondary Clarifiers. Recent projects disconnected the existing plant water line at various locations resulting in an incomplete loop. This piping will reconnect the lines to allow for a complete loop. See Exhibit 13.1 for photos and Exhibit 13.3 for proposed routing design.
 - (1) For above grade pipe material, assume cement-lined ductile iron or fiberglass-reinforced plastic.
 2. Follow existing alignment with new pipe. New alignments shall be kept as close to the existing alignment as feasible.
 - a. The Secondary Effluent Junction Box No. 4 (SEJB-4), located at the southwest corner of the Secondary Clarifiers, is congested with various utilities, such as plant water, secondary effluent, and reclaimed water lines, and associated valves. Follow the existing alignment in this important area.
 - b. Concrete encasement of HDPE, located on the west side of the Secondary Clarifiers on Fuentes Road, was installed under project P1-102 (2006). Assume potholing is necessary to survey the edge of the concrete and confirm the limits of the existing concrete encasement

do not interfere with this project. As much as possible, the new alignment shall avoid the concrete encasement.

1.4 PROJECT SCHEDULE

- A. **Table 1** lists major project deliverables along with Orange County Sanitation District's (OC SAN) review and approval periods. CONSULTANT shall comply with the deadlines indicated in that table. OC SAN will consider an alternative CONSULTANT proposed schedule provided it is consistent with OC SAN resources, schedule constraints, and adds value. The negotiated durations will set the design baseline schedule.

Table 1 – Project Milestones and Deadlines

MILESTONE	DEADLINE
Kickoff Meeting	The kickoff meeting will be scheduled to coincide with the Project Notice to Proceed (NTP).
Preliminary Design Memo (PDM)	[XX] workdays from Preliminary Design Phase NTP.
OC SAN Review of PDM	10 workdays from receipt of PDM.
Submit Design Submittal 3 (DS3)	[YY] workdays from approval of PDM.
OC SAN Review of DS3	15 workdays from receipt of DS3.
Submit Final Design Submittal (FDS)	15 workdays from receipt of OC SAN comments on DS3.
OC SAN Review of FDS	10 workdays from receipt of FDS.
Submit Final Technical Plans and Specifications (FTPS)	15 workdays from receipt of OC SAN comments on FDS.
Total	[ZZZ] workdays

1.5 PROJECT MANAGEMENT

- A. CONSULTANT shall be responsible for managing CONSULTANT's project execution, schedule, budget, subconsultants, and coordination with other projects.
- B. Per **Exhibit 18**, PMWeb will be used for the management of this agreement.
- C. [Monthly Progress Report: Submit monthly progress reports at the same time as monthly invoices that include the following contents:
1. Work activities completed to date, in the current reporting period, and projected for the coming month.
 2. A brief description of outstanding issues and potential cost, schedule, quality impacts.
 3. Potential changes in the project scope or design scope.
 4. Any corrective actions needed to avoid potential impacts.
 5. Budget status: actual costs to date, costs to complete, and costs at completion.
 6. Schedule status: variances between scheduled and forecasted milestone dates.]
- D. Monthly Invoices: Provide a monthly cost report and/or invoices, which shall document the man-hours and billing rate for each person that works on the project, and shall include the following:
1. Budget
 2. Current billing period invoicing
 3. Previous billing period "total invoiced to date"
 4. Budget Amount Remaining
 5. Current billing period "total percent invoiced to date"

1.6 QUALITY CONTROL

- A. Provide Quality Assurance and Quality Control of the work.
- B. Provide documentation upon request that the CONSULTANT has performed a quality control review in-house, and all the comments have been addressed prior to providing any submittals to OC SAN.

1.7 PROJECT MEETINGS

- A. CONSULTANT shall communicate throughout the project to keep OC SAN apprised of the job, review work-in-progress, share information, discuss project submittals, present findings of technical analyses, receive and resolve comments, and obtain decisions and direction by OC SAN staff.
 - 1. **Table 2** below lists the anticipated meetings and site visits. Microsoft Teams shall be used for meetings. CONSULTANT will provide an agenda 2 workdays prior to each meeting. Meeting minutes will be submitted to the OC SAN project manager for review within 3 workdays of the meeting.

Table 2 – Project Assumed Meetings and Site Visits

DESIGN ACTIVITY	MEETINGS	SITE VISITS
Kickoff Meeting	1 (1-hour)	
PDM	Progress meeting (1-hour, every 2 weeks)	8 hours
PDM Workshop	2 (1-hour)	
DS3	Progress meeting (1-hour, every 2 weeks)	8 hours
DS3 Workshop	2 (1-hour)	
FDS	Progress meeting (1-hour, weekly)	
FDS Workshop	1 (1-hour)	
FTPS	Progress meeting (1-hour, weekly)	
Construction Services	6 hours	24 hours
Closeout	4 hours	12 hours

1.8 SUBMITTAL REVIEWS

- A. Deliverables (other than specifications) shall be submitted in searchable PDF format with no hard copy. Deliverables shall be bookmarked and hyperlinked for navigation per **Exhibit 14**.
- B. OC SAN has standardized on the use of Bluebeam Revu for reviewing and providing comments to PDF files. The purpose of the studio session is to provide review and collaboration. OC SAN staff will create the Bluebeam studio session, invite attendees, configure, and manage the studio session. Make drawing submittals in Bluebeam and respond to OC SAN comments in Bluebeam per **Exhibit 15**.

1.9 SPECIFICATIONS

- A. Prior to preparing or editing specifications, CONSULTANT shall meet with OC SAN staff to determine which OC SAN and CONSULTANT provided specifications should be included in the design. After discussions, all specifications should be loaded in Microsoft Teams (Teams) early in design and prior to editing for DS3.
- B. Tailor all specifications to project and remove requirements that do not apply.
- C. Unless a CONSULTANT is using their own specification management software, Specifications should remain in Teams for editing throughout design. Make all edits to specifications hosted in Teams. Unless agreed to, Specifications should not be removed from Teams or edited elsewhere.
- D. Provide specifications as Microsoft Word (Word) files with Track Changes enabled throughout design.

- E. OC SAN staff will review specifications during submittal review periods. CONSULTANT shall respond to OC SAN comments using Word “Reply” and “Resolve.” CONSULTANT shall “Reply” to each OC SAN comment describing how the comment will be addressed and revise the specification, as needed, to address the comment. “Resolve” will be used by the reviewer or designee to confirm their comment has been addressed. For more information see **Exhibit 16**.
- F. Prior to advertisement, all Word comments and revisions shall be Track Changes accepted, rejected, resolved, or deleted by OC SAN staff prior to bid.

2 PRELIMINARY DESIGN

All significant material and equipment decisions are to be made before the start of Design. At the end Preliminary Design, major design elements shall be fixed, and major equipment, footprints, and utility connection locations shall be well established. The extent of the design and the number and type of drawings shall also be established.

2.1 PRELIMINARY DESIGN AND PDM

- A. The PDM shall consist of a PowerPoint presentation. Present PDM findings and recommendations to OC SAN in a stakeholder meeting using the PowerPoint presentation mentioned in this section for consensus before the start of Design.
- B. Identify any equipment that has one competitive supplier (i.e., sole source). In those cases, recommend an appropriate procurement strategy compatible with California Law and OC SAN policies.
- C. Develop 2 conceptual design alternatives for the plant water piping alignment.
 - 1. Alternatives:
 - a. Reuse exiting alignment and existing points of connection
 - b. Alternate alignment along tunnels in and around secondary clarifiers
 - 2. Perform the following with each alternative:
 - a. Cost, benefit, and life cycle analysis.
 - b. Identify plant water construction shutdown requirements with estimated durations.
 - c. Identify construction access requirements and limitations.
 - d. Prepare preliminary drawings (sketches).
 - 3. Discuss the available alternatives with OC SAN. The PDM shall include the recommendation alternative.
- D. Prepare drawings showing:
 - 1. Proposed alignment of piping
 - 2. Proposed piping materials and quantities
 - 3. Proposed quantity and type of valves and valve cans
 - 4. Proposed connection points which include the following:
 - a. New replacement pipes connecting to existing main plant water line
 - b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
 - 5. Demolition of existing ductile iron pipes and valves
 - 6. Proposed design of new valves and valve cans
 - 7. Proposed design of connection points
 - a. New replacement pipes connecting to existing main plant water lines

- b. New replacement pipes connecting to new valves
 - c. New replacement pipes connecting to hose bibs
- 8. Proposed design of pipe supports by typical detail and max spacing table
- E. Summarize key constructability and construction sequencing constraints.
 - 1. Develop process flow schematic of the components of the plant water system at Plant No. 1 that impact the pipelines being replaced.
- F. Prepare preliminary construction schedule.
- G. Prepare P&IDs: Fully detailed for each design "module", e.g., 1 pump set typical of all with proposed tagging strategy.
- H. Perform any potholing activities required for the concrete encasement survey specified under Element 1.
- I. Quantify soil contamination by determining the volume of excavation work needed to perform the Work. Coordinate with OC SAN ENGINEER to determine the area of excavation. Soil testing is not necessary.
- J. Develop testing requirements. Assume:
 - 1. Pressure leak and valve testing shall be included.
 - 2. Plant water operating pressure is 110 PSI.

2.2 PRELIMINARY DESIGN CONSTRUCTION COST ESTIMATE

- A. Prepare an AACE International Class 3 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01. Data used to prepare the cost estimate shall be included as an attachment to the PDM.
 - 1. Determine project specific and appropriate values to use for the percentages for profit, bond, and insurance.
 - 2. Costs for project level allowance, insurance, profit, and bond shall be cumulative and listed as individual line items.
 - 3. Allowances or mark ups should be well explained and itemized.
 - a. Include "Market Volatility" allowance of xx%.(revise based on the market conditions)
 - b. Do not setup allowance for change orders.
 - c. Do not escalate to midpoint of construction - this is by OC SAN.
 - 4. Specialty work should be recently (under 6 months) estimated by vendor.
 - a. For example, sewer bypassing services should be estimated by vendor (i.e., Rain 4 Rent).
 - b. Provide vendor quotes for high-cost equipment.
 - c. Minor equipment costs may be documented by written telephone quotations.
 - 5. Provide breakdown of lump sum costs.
 - 6. Show labor rates so they can be checked.
 - 7. Provide all back back up for all documentation obtained for the cost estimate purposes. The cost estimate back up shall have the date and the vendor name/contact name. If catalog price is used, provide the year of that publication.
- B. Prepare estimate of construction duration. The suggested construction duration shall take in considerations the verifiable lead time for all equipment.

3 DESIGN

Prepare biddable plans, technical specifications, other Bid Documents, and any associated design calculations, required to complete the Project Elements.

3.1 DS3 DELIVERABLES

- A. Meet at a 50% completion level with OC SAN staff to review design progress. Formal deliverables are not necessary. QA/QC is also not required for this preview.
- B. At this submittal, the design is essentially finished and submitted as complete. DS3 shall include all finished and checked plans and specifications. OC SAN staff will review DS3 and provide comments to the drawings and specifications. The CONSULTANT should be finished with no remaining design work except for OC SAN comments provided at DS3 review and their incorporation at FDS.
- C. [Prepare construction drawings in CAD conforming to OC SAN's CAD Manual. A CAD compliance check will be performed at DS3 (Exhibit 17, Chapter 8 explains the CAD compliance check, and Appendix D contains the "CAD Standards Compliance Checklist" summarizing all items checked by OC SAN). OC SAN will provide base layers and utilities for Work locations within the treatment plant boundaries.]

3.2 DS3 COST ESTIMATE

- A. Prepare an AACE International Class 2 cost estimate per OC SAN's Engineering Design Guidelines, Chapter 01 based on the DS3 design. Data used to prepare the cost estimate shall be included as an attachment to DS3.
- B. Prepare estimate of construction duration.

3.3 FDS DELIVERABLES

- A. Final Design Submittal (FDS) is for OC SAN to confirm all comments from DS3 have been addressed and incorporated and add any additional comments.

3.4 FTSP DOCUMENTS

- A. Final Technical Plans and Specifications is for the CONSULTANT to address and incorporate all comments and provide all necessary stamps and signatures for a complete bid package suitable for advertisement by OC SAN.

3.5 CONSTRUCTION COST ESTIMATE "ENGINEER'S ESTIMATE"

- A. 30 calendar days prior to advertisement, refresh the DS3 Class 2 cost estimate. Get updated vendor quotes used to prepare the DS3 cost estimate. This will become the Engineer's Estimate published in the front-end documents.

3.6 PERMITTING ASSISTANCE ([ALLOCATE 60 HOURS] [NOT INCLUDED IN THIS AGREEMENT])

- A. [For all applicable Project Elements of this Scope of Work, provide Bid Documents that ensure that the design complies with all conditions of existing permits and permits required to construct and implement this project. Testing, construction drawings, specifications, and supplemental drawings shall be prepared, as necessary, in the format required to obtain all permits.]
- B. Assist OC SAN in obtaining permits. This assistance shall include identifying applicable permits, completing required design, plan preparation, application forms provided by OC SAN, preparing supporting documentation for the permit applications as required by the issuing agency, furnishing the required number of copies of all construction drawings and exhibits, and attend meetings with permitting agencies at the request of OC SAN.
- C. Except for construction contractor-furnished permits, OC SAN staff will execute all applications. CONSULTANT shall determine the cost and requirements of all permits. All permit fees will be paid directly by OC SAN and will not be part of CONSULTANT's fee.
- D. Submit all supporting documentation in a timely fashion for all permits required for this project as described below.
 - 1. Caltrans Encroachment Permits

- a. Determine if encroachment permits or other types of permits are required by Caltrans for the design and construction phases. Provide the work necessary to obtain such permits including coordinating and attending meetings.

2. City/County Encroachment Permits

- a. Provide coordination, work effort, and attend meetings, as required, to obtain encroachment permits from each city and agency who has jurisdiction. Process the plans through the cities and agencies for approval, revise plans, and meet with them, as required, to obtain approval.]

3.7 BID SUPPORT SERVICES

- A. Provide answers to bidder's questions related to the design. Provide revisions to specifications and drawings when needed for addendum.
- B. Within 2 weeks of the bid opening date, prepare conformed document set (drawings, databases, specification, and other required materials) that incorporates the addenda. See requirements of OC SAN's CAD Manual.

3.8 POPULATE PMWEB LIST OF SUBMITTALS (ALLOCATE 24 HOURS)

- A. PMWeb is used to manage communication with the contractor. OC SAN uses an Excel template to populate the list of all submittals. The CONSULTANT shall review each project specification and complete the Submittal Items Template as follows:
 1. Enter the list of project specifications.
 2. Enter the list of commissioning packages. Commissioning packages are defined by Section 01810, Commissioning.
 3. Enter the following information for each submittal item.
 - a. Specification section: enter the specification section requiring the submittal.
 - b. Submittal Item description: enter the description of the submittal. Submittal items that refer to multiple specifications shall include referenced specification sections in brackets.
 - c. Comments: enter notes, comments, or clarifications. This field is optional.
 - d. Commissioning package: enter the commissioning package of the submittal item. Submittal items shall be duplicated when the same submittal is required for multiple commissioning packages. Items shall be separated into mobilization, general construction, or a commissioning package defined by the project specifications.
 - e. Phase: Identify which phase each submittal is required to be approved.
 - f. Retention: Specify if the submittal is a Project File or Facility Record based on OC SAN's Records Retention Policy.
 - g. Lead time: Specify the appropriate number of workdays that OC SAN has to review the particular submittal.
 - h. Load: Specify if the submittal should be loaded into PMWeb prior to NTP, upon contractor approval, or prior to the start of commissioning.
- B. OC SAN will provide a PMWeb Master Submittal Items template that includes the submittals required by OC SAN's Master Specifications. The CONSULTANT shall not deviate from the Master PMWeb Submittal Items, except as required by the project specific specifications. The CONSULTANT shall develop submittal items for specifications that are not part of OC SAN's Master Specifications.
- C. OC SAN will provide a 1-hour virtual training on the use of the PMWeb Master Submittal Items Template.
- D. The CONSULTANT shall populate, receive comments, address comments, and provide completed submittal form as follows:
 1. 20 workdays after advertisement date.

3.9 SAFETY AND RISK MEETING

- A. Ensure that an OC San Risk Management safety and security professional has been assigned to the project.
- B. CONSULTANT shall prepare and meet with OC San Risk Management personnel at all design stages to review Exhibit 11 Sample Full Project Safety Review Plan and Exhibit 12 Sample Risk Management Check List. This shall be completed in accordance with Exhibit 4 Risk Management Requirements.
- C. CONSULTANT shall update Exhibits 11 and 12 throughout the design phases. CONSULTANT shall provide OC San Risk Management with the final copies of Exhibit 11 and Exhibit 12 at completion of the Design Project.

4 CONSTRUCTION SERVICES

OC SAN will administer and provide field inspection for construction contracts. Construction and installation support services shall be provided by the CONSULTANT on an as-needed basis and as requested by OC SAN. The services are indicated below.

4.1 SUBMITTAL REVIEWS (ALLOCATE 15 HOURS)

- A. OC SAN will manage submittal review. The CONSULTANT shall use PMWeb to review and return comments to OC SAN. Return comments within 5 workdays.

4.2 REQUESTS FOR INFORMATION (RFIS) (ALLOCATE 15 HOURS)

- A. OC SAN will manage the processing of RFI's. When requested by OC SAN, CONSULTANT shall return written responses to OC SAN within 5 workdays of receipt of RFI using PMWeb. Generate necessary sketches, figures, and modifications to the drawings for clarifications.

4.3 PROGRESS MEETINGS AND SITE VISITS

- A. Refer to **Table 2**.

4.4 RECORD DRAWINGS

- A. Verify that the Contractor's As-Built set correctly reflects the information included in the approved shop drawings, RFIs, approved Field Change Orders, plan clarifications, plan changes, and other deviations from the conformed drawings, and that the information in the set is complete.
- B. Draft Record Drawings shall be submitted to OC SAN within 4 weeks of receipt from OC SAN of the approved Contractor's As-Built drawings. The Final Record Drawings shall be submitted within one week of receipt of OC SAN comments on the Draft Record Drawings.
- C. Prepare Draft Record Drawings based on the Final Field Markup Set for all drawings in accordance with the requirements in the CAD Manual. Submit the Draft Record Drawings to the OC SAN Resident Engineer. The Draft Record Drawings will be reviewed for content and CAD compliance by OC SAN staff. If no comments are identified, CONSULTANT shall prepare the Final Record Drawings and submit them along with the Contractor's field markup set to the Project Manager. For content and placement of record drawing stamp, see CAD Manual.
- D. Submit an electronic copy of the record drawings to OC SAN for review and approval. The acceptance of the record drawings shall be deemed a condition for completion of work.
- E. Contractor-generated drawings described in the Design Guidelines and the shop drawings will not be updated by CONSULTANT. The format and quantities for delivery of the submittals shall be listed below:

Contents	Draft Record Drawings	Final Record Drawings
All related electronic files, including CAD and compiled PDFs.	One copy to be uploaded to Microsoft Teams.	One copy to be uploaded to Microsoft Teams.

4.5 EQUIPMENT INFORMATION DATABASE (EID) (ALLOCATE [X] HOURS [NOT INCLUDED IN THIS AGREEMENT])

- A. OC SAN uses Maximo software to manage and track asset information. When new assets are added or existing assets are modified by a project, an EID Excel spreadsheet is used to populate or update Maximo asset information. CONSULTANT shall meet with OC SAN EIM staff to request an EID spreadsheet pre-populated with the new or modified assets. OC SAN staff will provide training on how to populate the EID spreadsheet. Field work will be needed to apply equipment tags and record equipment nameplate information and serial numbers to populate the EID. Coordinate with Maintenance Specialists (David Haug or designee, Div. 870) to walk new facilities to verify accuracy of P&IDs and EID.

4.6 [UPDATE BASELINE DRAWINGS]

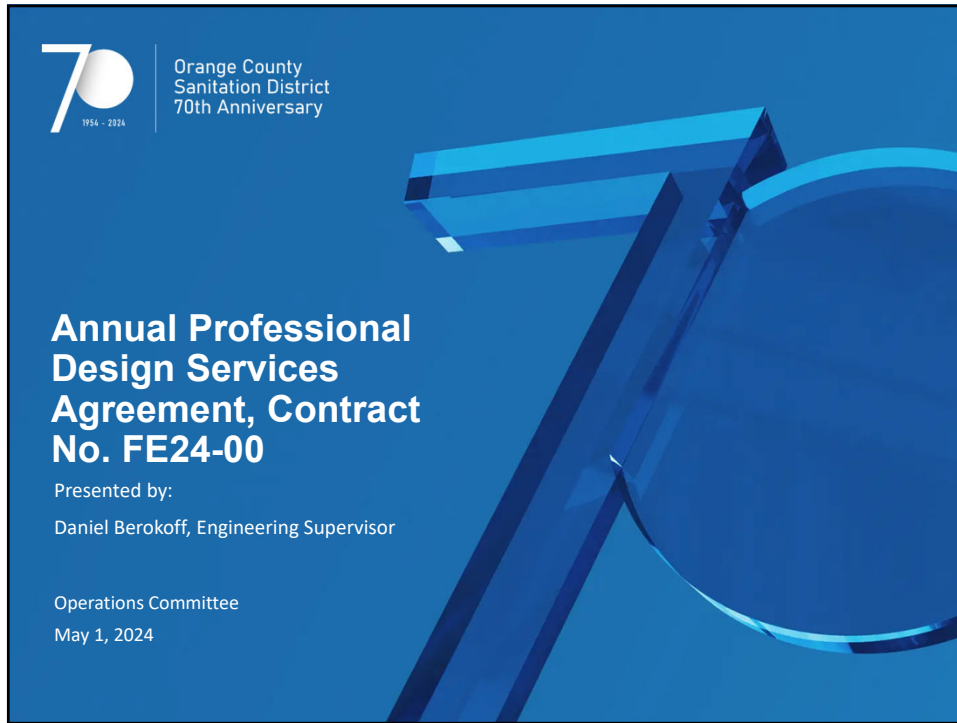
5 STAFF ASSISTANCE

OC SAN staff member or designee assigned to work with CONSULTANT on the design of this project is Jessica Cheung. Phone (714) 593-7147, e-mail jcheung@ocsan.gov.

6 EXHIBITS

- A. Exhibits 1-3, 5-10 – Not Used
- B. Exhibit 4 – Risk Management Requirements
- C. Exhibit 11 – Sample Full Project Safety Review Plan
- D. Exhibit 12 – Sample Risk Management Checklist
- E. Exhibit 13 – Project Reference Material
 - a. 13.1 – Photos
 - b. 13.2 – Plant 1 Plant Water System Map
 - c. 13.3 – Proposed Design Idea (The CONSULTANT may start with this conceptual design.)
 - d. 13.4 – Proposed Valve Cans (The CONSULTANT may start with this conceptual design.)
 - e. 13.5 – Record Drawings (Available Upon Request)
 - (1) P1-82, Activated Sludge Plant Rehabilitation (2005)
 - (2) P1-36-2, Secondary Treatment Improvements at Plant No. 1 (1995)
 - (3) P1-16, 46 MGD Activated Sludge Plant at Reclamation Plant No. 1 (1973)
 - (4) P1-102, Secondary Activated Sludge Facility 2 at Plant No.1 (2006)
- F. Exhibit 14 – BlueBeam Designer Training for Submission
- G. Exhibit 15 – BlueBeam Designer User Training
- H. Exhibit 16 – Spec Review using Microsoft Word and Teams
- I. Exhibit 17 – [CAD Standard Manual](#)
- J. Exhibit 18 – PMWeb

JC:tk



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70
Orange County
Sanitation District
70th Anniversary

Importance of Small Projects

- Bridges the gap to large CIPs
- Increases life of various facilities
- Leverage the Professional Design and Related Services Agreement less than or equal to \$500K to accomplish essential projects quickly/effectively

2

2

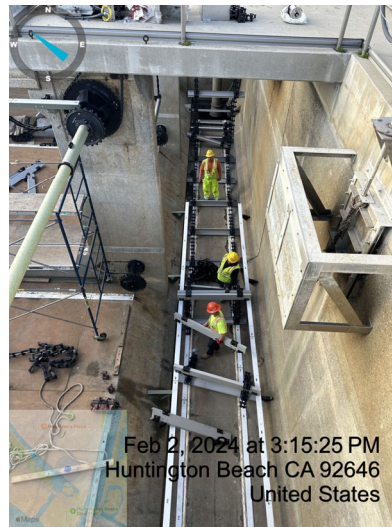
Current Small Projects

Orange County
Sanitation District
70th Anniversary

76 Active Small Projects (\$94M) + 39 Backlog Projects (\$5.5M)



Sunflower Pump Station at Plant No. 1



Secondary Clarifier at the Activated Sludge Facility at Plant No. 2

3

3

Sample Schedule

70
Orange County
Sanitation District
70th Anniversary

Administrative Facilities Demolition

Request For Task Order Proposals (RFTOP) Schedule

2024				2025				2026				2027				2028			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
			RFTOP Advertisement		Design NTP						Construction NTP				Construction Complete				

4

4

Project Types



Type 1: Site Works, Building and Safety



Type 2: Linear and Collections



Type 3: Process, Electrical and I&C



	Firm	Type 1	Type 2	Type 3
1.	AtkinsRéalis USA, Inc.			X
2.	Black and Veatch Corporation		X	X
3.	Brown and Caldwell	X	X	X
4.	Civiltec Engineering, Inc.	X	X	
5.	Dudek	X	X	X
6.	GHD Inc.		X	X
7.	Hazen and Sawyer	X	X	X
8.	HDR Engineering, Inc.	X	X	X
9.	Kennedy/Jenks Consultants, Inc.		X	X
10.	Kleinfelder, Inc.		X	
11.	Lee & Ro, Inc.		X	X
12.	Michael Baker International, Inc.		X	X
13.	ProjectLine Technical Services, Inc.	X		X
14.	SPEC Services, Inc.			X
15.	Stantec Consulting Services, Inc.	X	X	X

5

5

Recommendation



Recommend to the Board of Directors to:

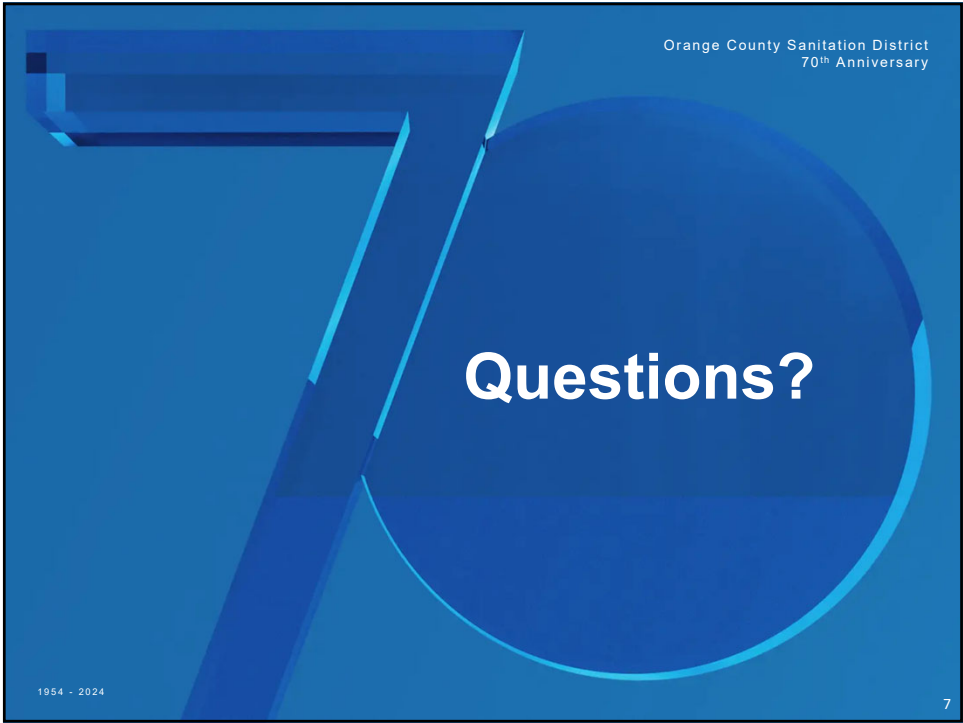
- A. Approve Annual Professional Design Services Agreement (PDSA) with the following firms to provide professional engineering design and construction support services for a term of three (3) years commencing July 1, 2024 and expiring June 30, 2027, with a maximum annual fiscal year contract limitation not to exceed \$1,000,000 for each PDSA, and

	Firm	Contract No.
1.	AtkinsRéalis USA, Inc.	FE24-00-01
2.	Black and Veatch Corporation	FE24-00-02
3.	Brown and Caldwell	FE24-00-03
4.	Civiltec Engineering, Inc.	FE24-00-04
5.	Dudek	FE24-00-05
6.	GHD Inc.	FE24-00-06
7.	Hazen and Sawyer	FE24-00-07
8.	HDR Engineering, Inc.	FE24-00-08
9.	Kennedy/Jenks Consultants, Inc.	FE24-00-09
10.	Kleinfelder, Inc.	FE24-00-10
11.	Lee & Ro, Inc.	FE24-00-11
12.	Michael Baker International, Inc.	FE24-00-12
13.	ProjectLine Technical Services, Inc.	FE24-00-13
14.	SPEC Services, Inc.	FE24-00-14
15.	Stantec Consulting Services, Inc.	FE24-00-15

- B. Approve two additional one-year optional extensions for each PDSA.

6

6





OPERATIONS COMMITTEE

Agenda Report

Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708
(714) 593-7433

File #: 2023-3042

Agenda Date: 5/1/2024

Agenda Item No: 5.

FROM: Robert Thompson, General Manager
Originator: Mike Dorman, Director of Engineering

SUBJECT:

TAFT BRANCH IMPROVEMENTS, PROJECT NO. 2-49

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION: Recommend to the Board of Directors to:

- A. Adopt Resolution No. OC SAN 24-XX entitled: "A Resolution of the Board of Directors of the Orange County Sanitation District adopting the mitigated negative declaration for the Taft Avenue Sewer Improvement Project, Project No. 2-49; adopting a mitigation monitoring and reporting program; and approving the Taft Branch Improvements, Project No. 2-49" which (1) adopts the Initial Study / Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program for the Taft Avenue Sewer Improvement Project, Project No. 2-49, prepared by Woodard & Curran Inc.; (2) approves the project; and (3) directs staff to file a Notice of Determination pursuant to the California Environmental Quality Act;
- B. Approve a project budget increase of \$3,900,000 for Taft Branch Improvements, Project No. 2-49, for a new total project budget of \$31,200,000;
- C. Receive and file the Bid Tabulation and Recommendation for Taft Branch Improvements, Project No. 2-49;
- D. Award a Construction Contract Agreement to Big Ben Inc. for Taft Branch Improvements, Project No. 2-49, for a total amount not to exceed \$20,458,250;
- E. Approve a contingency of \$2,045,825 (10%);
- F. Approve the Sewer Transfer Agreement between Orange County Sanitation District and the City of Orange, in a form approved by General Counsel; and direct the Clerk of the Board to record the document with the Orange County Clerk-Recorder's office; and
- G. Approve the Memorandum of Understanding between Orange County Sanitation District and the City of Orange for the Construction and Transfer of Sewer Facilities in Conjunction with Project No. 2-49.

BACKGROUND

The Orange County Sanitation District (OC San) owns and maintains regional conveyance facilities in the City of Orange, including the 60-year-old 12 to 18-inch diameter Taft Branch sewer.

RELEVANT STANDARDS

- Comply with California Public Contract Code Section 20103.8, award construction contract to lowest responsive, responsible bidder
- Ensure the public's money is wisely spent
- Sound engineering and accounting practices, complying with local, state, and federal laws

PROBLEM

The 2019 Master Plan Update (Collections Capacity Evaluation Study) determined the Taft Branch does not have enough capacity under peak wet weather conditions. Additionally, the current sewer alignment has restricted maintenance access where it crosses under the 55 Freeway just south of Meats Avenue.

PROPOSED SOLUTION

Award a construction agreement for Taft Branch Improvements, Project No. 2-49. This project will upsize the upper reach of the Taft Branch sewer in the City of Orange. This will include replacement of nearly 7,000 feet of pipe and associated manholes along Meats Avenue and Taft Avenue. It includes a new alignment of 3,400 feet on Sacramento Street and Taft Avenue to alleviate existing manhole access issues. The project will also include a swap of regional and local sewers including 2,700 feet of existing OC San piping on Tustin Avenue to be transferred to the City of Orange and 2,600 feet of regional piping owned by City of Orange to be transferred to OC San.

TIMING CONCERNS

The piping is undersized for wet weather flows and until it is upsized there is an increased risk of a spill during a large storm.

RAMIFICATIONS OF NOT TAKING ACTION

Not increasing the project budget will prevent OC San from awarding the construction contract agreement and mitigating the wet weather risks.

PRIOR COMMITTEE/BOARD ACTIONS

N/A

ADDITIONAL INFORMATION

OC San advertised Project No. 2-49 for bids on January 10, 2024, and four sealed bids were received on March 12, 2024. A summary of the bid opening follows:

Engineer's Estimate	\$ 22,700,000
<u>Bidder</u>	<u>Amount of Bid</u>
Big Ben Inc.	\$20,458,250
James W. Fowler Co.	\$22,679,500
T.E. Roberts, Inc.	\$24,817,422
ARB, Inc.	\$24,976,165

The bids were evaluated in accordance with OC San's policies and procedures. A notice was sent to all bidders on April 10, 2024 informing them of the intent of OC San staff to recommend award of the Construction Contract Agreement to Big Ben Inc.

Staff recommends awarding a Construction Contract Agreement to the lowest responsive and responsible bidder, Big Ben Inc., for a total amount not to exceed \$20,458,250.

CEQA

Pursuant to CEQA, Public Resources Code Section 21000 et seq., OC San, as lead agency, caused Woodard & Curran, Inc. to prepare an initial study to analyze the potential environmental impacts of the proposed Taft Avenue Sewer Improvement Project (the "Project"). Based on the Initial Study and its supporting technical analyses, it was determined that all of the Project's potentially significant environmental impacts can be mitigated to a level of less than significant. On this basis, a Mitigated Negative Declaration (the "MND") and Mitigation Monitoring and Reporting Program (the "MMRP") have been prepared. (State Clearinghouse No. 2023070293.)

The 30-day public comment period for the MND occurred from July 18, 2023 to August 17, 2023. OC San prepared written responses to comments that were received during the public comment period.

There is no substantial evidence that the Project, as mitigated, will have a significant effect on the environment. Accordingly, staff recommends the adoption of the MND and the MMRP. The MND, MMRP, and related Resolution are attached to this report.

FINANCIAL CONSIDERATIONS

This request complies with the authority levels of OC San's Purchasing Ordinance. This item has been budgeted (Budget Update, Fiscal Year 2023-2024, Appendix A, Page 7, Taft Branch Improvements, Project No. 2-49). This item will increase the project budget and will be funded from the CIP budget.

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- Resolution No. OC SAN 24-XX
- Final Initial Study and Mitigated Negative Declaration
- Mitigation Monitoring and Reporting Program
- Construction Contract Agreement
- Sewer Transfer Agreement - City of Orange
- Memorandum of Understanding - City of Orange
- Presentation

RESOLUTION NO. OC SAN 24-XX

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE ORANGE COUNTY SANITATION DISTRICT ADOPTING THE MITIGATED NEGATIVE DECLARATION FOR THE TAFT AVENUE SEWER IMPROVEMENT PROJECT, PROJECT NO. 2-49; ADOPTING A MITIGATION MONITORING AND REPORTING PROGRAM; AND APPROVING THE TAFT BRANCH IMPROVMENTS, PROJECT NO. 2-49

WHEREAS, the Orange County Sanitation District ("OC San") has proposed a project known as the Taft Avenue Sewer Improvement Project, Project No. 2-49, which is designed to increase the capacity of a portion of the Taft Branch regional sewer to meet existing and anticipated demand (the "Project"); and

WHEREAS, the Project involves the replacement and relocation of a portion of the Taft Branch regional sewer in the City of Orange and includes the construction and operation of approximately 11,000 linear feet of vitrified clay sewer pipelines, ranging in size from 8 to 21 inches in diameter, 39 new maintenance holes, and would abandon approximately 8,000 feet of existing sewer pipeline and would remove 32 existing maintenance holes; and

WHEREAS, pursuant to the California Environmental Quality Act, Public Resources Code Sections 21000 et seq. ("CEQA") and the CEQA Guidelines, California Code of Regulations, Title 14, Sections 15000 et seq., OC San, acting as the Lead Agency, prepared an Initial Study/Mitigated Negative Declaration ("IS/MND") for the Project that analyzes the potential impacts of the Project, and identifies mitigation measures as needed (State Clearinghouse No. 2023070293); and

WHEREAS, a public review period of 30 days was provided for the IS/MND which commenced on July 18, 2023, and ended August 17, 2023; and

WHEREAS, OC San has reviewed the comments received and has prepared written responses to the significant environmental issues raised during the public review process; and

WHEREAS, the Mitigated Negative Declaration has been presented to the OC San's Board of Directors (the "Board") for review and consideration prior to the approval of, and commitment to, the Project.

NOW, THEREFORE, the Board of Directors of the Orange County Sanitation District DOES HEREBY RESOLVE, DETERMINE AND ORDER:

1. The Board has independently reviewed and considered the IS/MND together with all comments received during the public review process; and

2. The IS/MND reflects the independent judgment and analysis of the Board; and
3. The IS/MND has been completed in compliance with CEQA; and
4. The Board finds on the basis of whole record before it that there is no substantial evidence that the Project, as mitigated, will have a significant effect on the environment; and
5. The Board adopts the Taft Street Sewer Improvement Project IS/MND; and
6. The Board adopts the Taft Street Sewer Improvement Project Mitigation Monitoring and Reporting Program; and
7. The Board approves the Taft Avenue Sewer Improvement Project, Project No. 2-49; and
8. The documents and other materials that constitute the record of proceedings on which the Board's decision is based, are located at the OC San Administration Offices, 10844 Ellis Avenue, Fountain Valley, CA 92708, and the custodian for these documents is the Clerk of the Board; and
9. OC San staff is authorized and directed to file the Notice of Determination ("NOD") and any other required documents in accordance with the requirements of CEQA.

PASSED AND ADOPTED at a regular meeting of the Orange County Sanitation District Board of Directors held May 22, 2024.

Chad P. Wanke
Board Chairperson

ATTEST:

Kelly A. Lore, MMC
Clerk of the Board

APPROVED AS TO FORM:

Bradley R. Hogin
General Counsel

STATE OF CALIFORNIA)
) ss
COUNTY OF ORANGE)

I, Kelly A. Lore, Clerk of the Board of Directors of the Orange County Sanitation District, do hereby certify that the foregoing Resolution No. OC SAN 24-XX was passed and adopted at a regular meeting of said Board on the XXth day of XX 2024, by the following vote, to wit:

AYES:
NOES:
ABSENT:
ABSTENTIONS:

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of Orange County Sanitation District this XXth day of XXXXX 2024.

Kelly A. Lore, MMC
Clerk of the Board of Directors
Orange County Sanitation District



Final Initial Study and Mitigated Negative Declaration

Taft Sewer Improvement Project

State Clearinghouse Number 2023070293

Prepared by:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708

With Assistance From:



530 Technology Way, Suite 100
Irvine, CA 92618
949.420.5306
November 2023

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Acronyms

Acronym	Definition
AB	Assembly bill
BMPs	Best management practices
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Cal Fire	California Department of Forestry and Fire Protection
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CDOC	California Department of Conservation
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH ₄	Methane
CHRIS	California Historical Resources Information System
CNEL	Community Noise Equivalent Level
CO	Carbon monoxide
CO ₂	Carbon dioxide
Db	Decibel
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
EIR	Environmental Impact Report
EO	Executive order
FEMA	Federal Emergency Management Agency
FHWA	US Department of Transportation Federal Highway Administration
FMP	Facilities Master Plan
FRAP	Fire Resources Assessment Program
FTA	Federal Transit Administration
GHG	Greenhouse gas
GSP	Groundwater sustainability plan

Acronym	Definition
GWP	Global warming potential
H ₂ S	Hydrogen sulfide
HUC	Hydrologic unit code
IS	Initial Study
IS/MND	Initial Study/Mitigated Negative Declaration
LRA	Local Responsibility Area
LST	Localized significance threshold
LUST	Leaking underground storage tank
MBTA	Migratory Bird Treaty Act
MH	Maintenance hole
MND	Mitigated Negative Declaration
MWD	Metropolitan Water District of Southern California
MTCO ₂ e	Metric tons of carbon dioxide equivalents
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP/HCP	Natural Community Conservation Plan/Habitat Conservation Plan
ND	Negative Declaration
N ₂ O	Nitrous oxide
NO ₂ /NO _x	Nitrogen dioxide
NO _x	Oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
OC San	Orange County Sanitation District
OCTA	Orange County Transit Agency
OCWD	Orange County Water District
O&M	Operations and maintenance
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
Pb	Lead
PEIR	Program Environmental Impact Report
PM	Particulate matter
PPV	Peak particle velocity

Acronym	Definition
PRC	Public Resources Code
PVC	Polyvinyl chloride
RCNM	Roadway Construction Noise Model
RMS	Root mean square
ROG	Reactive organic gas
<u>RTC</u>	<u>Responses to comments</u>
RTP/SCS	Regional Transportation Plan and Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SO ₂	Sulfur dioxide
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SGMA	Sustainable Groundwater Management Act
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SRA	State Responsibility Area
TAC	Toxic air contaminant
TCR	Tribal cultural resource
UC	University of California
US EPA	United States Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
VCP	Vitrified clay pipe
VDB	Vibration decibels
VHFHSZ	Very high fire hazard severity zone
VMT	Vehicle miles travelled
VOC	Volatile organic compound

COMMENT LETTER AND RESPONSES

The Draft Initial Study and Mitigated Negative Declaration (IS/MND) for the Taft Avenue Sewer Rehabilitation Project was circulated for public review from July 18, 2023, to August 17, 2023. (Details regarding the public circulation process are provided in Section 1.4 of this Final MND). One comment letter was received, from Orange County Public Works Department of Development Services.

Orange County Sanitation District (OC San) has provided a written response to the Orange County Public Works comment. The comment letter and responses are provided on the following pages in side-by-side format. The comments have been numbered and are provided on the left side of the page. OC San's response is provided on the right of the page opposite each comment.

Comments received during the public review period did not result in changes to the findings or mitigation measures of the MND, and the MND text remains unchanged in this Final IS/MND, except where noted in redline.



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Administrative
Services



OC Development
Services



OC Facilities Design
& Construction
Management



OC Facilities
Maintenance
& CUP



OC Fleet Services



OC Construction



OC Environmental
Resources



OC Operations &
Maintenance



OC Infrastructure
Programs



OC Survey



August 16, 2023

Kevin Hadden
Principal Staff Analyst
Orange County Sanitation District
Engineering Planning
10844 Ellis Avenue
Fountain Valley, California 92708

Subject: Notice of Intent to Adopt an Initial Study/ Mitigated Negative Declaration for the Taft Sewer Improvement Project

Dear Kevin Hadden,

Thank you for the opportunity to comment on the Notice of Intent to Adopt an Initial Study/ Mitigated Negative Declaration for the Taft Sewer Improvement Project.

The County offers the following comments for your consideration, specific to water quality issues to be addressed.

OC Environmental Resources:

1. Projects that, as part of a common plan of development, disturb one or more acres are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity, Order 2022-0057-DWQ (and subsequent Order 2009-0009-DWQ) and implement a Storm Water Pollution Prevention Plan (SWPPP) and monitoring program consistent with permit requirements.
2. Specific mention should be made of whether the project qualifies as a Priority Development Project under the city's municipal stormwater permit (Santa Ana Regional Board Order R8-2009-0030), or instead is a Non-Priority Project which would require preparation of a Non-Priority Water Quality Project Plan.
3. New development projects that create 10,000 square feet or more of impervious surface require the development of a Water Quality Management Plan (WQMP). Specific mention should be made of applicable city WQMP requirements for projects to comply with their municipal stormwater permits.
4. Specific mention should be made of the Orange County Stormwater Program's Drainage Area Management Plan (DAMP). The DAMP is Orange County's principal policy and program guidance document for stormwater management and includes the Technical Guidance Document to be followed in preparing the project's WQMP if required.
5. Specific mention should be made of the potential water quality impacts from the proposed project and identification of the anticipated pollutants to be generated or mobilized by the project should be provided.

A-1

A-2

A-3

A-4

A-5

A-1 Construction of the proposed project would disturb more than one acre of land and would require a National Pollutant Discharge Elimination System (NPDES) Construction General Permit. A Stormwater Pollution Prevention Plan (SWPPP) would be prepared and implemented in compliance with the Construction General Permit. See **Table 2-3 Permits and Approvals**.

In addition, OC San General Requirements, which are incorporated into the design and construction of all OC San projects, requires the contractor to prepare a SWPPP. See **Section 2.6 Environmental Commitments**.

A-2 The proposed project is a below ground sewer rehabilitation project located within the existing paved public right of way in the City of Orange. The need for a Water Quality Management Plan will be determined by the City of Orange during the design phase of the proposed project.

A-3 See Response to Comment A-2.

www.OCPublicWorks.com
(714) 667-8800 | Info@OCPW.org

A-5 The proposed project would require trenching which could result in the mobilization of disturbed soil through wind and rain erosion. Construction activities could also generate pollutants such as oil, fuel, and other lubricants through the temporary use of construction equipment. These expected pollutants are typical in stormwater runoff during construction and would be controlled and managed through implementation of Best Management Practices outlined in the Stormwater Pollution Prevention Plan. See detailed discussion in **Section 3.10a Hydrology and Water Quality.**

1. INTRODUCTION

1.1 Purpose of this Document

Orange County Sanitation District (OC San) has prepared this Initial Study (IS) to evaluate the potential environmental impacts related to implementation of the Taft Avenue Sewer Rehabilitation Project (the “proposed project”, “project”), which consists of construction and operation of sewer transmission facilities.

OC San is the lead agency under the California Environmental Quality Act (CEQA) for the proposed Project. CEQA requires that the lead agency prepare an IS to determine whether an Environmental Impact Report (EIR), Negative Declaration (ND), or Mitigated Negative Declaration (MND) is needed. OC San has prepared this IS to evaluate the potential environmental consequences associated with the project, and to disclose to the public and decision makers the potential environmental effects of the proposed project. Based on the analysis presented herein, an MND is the appropriate level of environmental documentation for the proposed project.

1.2 Document Background

The proposed project was included in the Orange County Sanitation District 2020 Program Environmental Impact Report Facilities Master Plan (the PEIR). In that document, the proposed project was referred to as “project 2-49,” consistent with the numbering of the sewer collection system improvement projects in the Facilities Master Plan (FMP). This CEQA document tiers from the PEIR, incorporating background and setting information, analyses, and mitigation measures from the PEIR.

1.3 Scope of this Document

This IS/MND has been prepared in accordance with CEQA (as amended) (Public Resources Code Section 21000 et. seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 15000 et. seq.), as updated on December 28, 2018. CEQA Guidelines Section 15063 describes the requirements for an IS and Sections 15070–15075 describe the process for the preparation of an MND. Where appropriate, this document refers to either the CEQA Statute or State CEQA Guidelines (as amended in December 2018). This IS/MND contains all of the contents required by CEQA, which includes a project description, a description of the environmental setting, potential environmental impacts, mitigation measures for any significant effects, consistency with plans and policies, and names of preparers.

This IS/MND evaluates the potential for environmental impacts to resource areas identified in Appendix G of the State CEQA Guidelines (as amended in December 2018). The environmental resource areas analyzed in this document include:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation

- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire
- Mandatory Findings of Significance

1.4 CEQA Process

In accordance with CEQA Guidelines Section 15073, the Draft IS/MND ~~will be~~was circulated for a 30-day public review period (July 18, 2023 – August 17, 2023) to local and state agencies, and to interested organizations and individuals who ~~may wish~~wished to review and comment on the report. OC San ~~will~~circulated the Draft IS/MND to the State Clearinghouse for distribution to State agencies. In addition, OC San ~~will~~circulated a Notice of Intent to Adopt a Mitigated Negative Declaration to the Orange County Clerk, responsible agencies, and interested entities. A copy of the Draft IS/MND ~~was~~is available for review at <https://www.ocsan.gov/CEQA>.

Written comments ~~can be~~were to be submitted to OC San by 5:00 pm on August 17, 2023 and addressed to:

Kevin Hadden, Principal Staff Analyst
CEQA@ocsan.gov

Following the 30-day public review period, OC San ~~will~~evaluated all comments received on the Draft IS/MND and incorporated any substantial evidence that the proposed project could have an impact on the environment into the Final IS/MND. Additionally, OC San and prepared a Mitigation Monitoring and Reporting Program (MMRP) for the Taft Avenue Sewer Rehabilitation Project. Comments received during the public review period did not result in changes to the findings or mitigation measures of the MND. The IS/MND text remains unchanged in this Final IS/MND except for minor grammar and punctuation error corrections, and changes noted in ~~strikeout~~/underline.

The IS/MND and MMRP will be considered for adoption by the OC San Board of Directors in compliance with CEQA at a ~~future~~publicly noticed hearing in March 2024, which are held on the 4th Wednesday of every month at 6:00 pm in the OC San Administrative Offices located at 10844 Ellis Avenue, Fountain Valley.

1.5 Impact Terminology

The level of significance for each resource area uses CEQA terminology as specified below:

No Impact. No adverse environmental consequences have been identified for the resource or the consequences are negligible or undetectable.

Less than Significant Impact. Potential adverse environmental consequences have been identified. However, they are not adverse enough to meet the significance threshold criteria for that resource. No mitigation measures are required.

Less than Significant with Mitigation Incorporated. Adverse environmental consequences that have the potential to be significant but can be reduced to less than significant levels through the application of identified mitigation strategies that have not already been incorporated into the proposed project.

Potentially Significant. Adverse environmental consequences that have the potential to be significant according to the threshold criteria identified for the resource, even after mitigation strategies are applied and/or an adverse effect that could be significant and for which no mitigation has been identified. If any potentially significant impacts are identified, an EIR must be prepared to meet the requirements of CEQA.

2. PROJECT DESCRIPTION

2.1 Project Overview

The Taft Sewer Improvement Project ("project", "proposed project") involves construction and operation of approximately 10,700 linear feet of OC San vitrified clay sewer pipelines (VCP), ranging in size from 18 to 21 inches in diameter, approximately 420 linear feet of smaller 8-inch diameter City of Orange service laterals, and approximately 80 linear feet of 18-inch diameter City of Orange sewer pipeline. The project would connect to existing City of Orange sewer at the intersection of Meats Avenue and Santiago Boulevard and to existing OC San sewer at the intersection of Taft Avenue and Glassell Street. The project would abandon approximately 8,000 feet of existing OC San sewer pipeline including 1,200 linear feet of the existing pipeline along Meats Avenue at the State Route 55 crossing. The project would also abandon approximately 820 linear feet of existing City of Orange service laterals that would be reconnected as part of the project. Please refer to *Section 2.4 Proposed Project Description* for a detailed description of the project components.

The PEIR described project 2-49 as follows, "Project 2-49 would replace in place a portion of the Taft Branch regional sewer located in a developed area of the City of Orange. Approximately 10,000 feet of 12- to 18-inch-diameter pipe would be replaced. The project begins at the intersection of Meats Avenue and N. Breckenridge Street, where an east-west segment is located in a utility easement just south of Taft Avenue. The pipe crosses beneath State Route 55, and then turns south on N. Tustin Street for approximately 2,500 feet before turning west on Taft Avenue. The project is located in Taft Avenue for approximately 5,000 feet, and terminates just east of the intersection with Glassell Street. The project would increase the capacity of a portion of the Taft Branch regional sewer to meet existing and anticipated demand, and 72 manholes are scheduled to be replaced along the pipeline replacement segment."

Based on subsequent engineering analysis, refinements to Project 2-49 were made. As shown in **Figure 2-1**, the proposed project alignment has changed slightly in comparison to the alignment presented in the PEIR. *Section 2.4 Proposed Project Description* describes the current proposed project.

2.2 Project Purpose

The PEIR, Section 3.2, lists a number of objectives from the FMP. The objectives applicable to the proposed project are as follows:

- Maintain the Sanitation District's wastewater conveyance system in optimal condition for full functionality.
- Meet existing and projected demands for wastewater conveyance in the Sanitation District's service area.
- Comply with existing regulations governing wastewater treatment and disposal.

Consistent with the PEIR objectives, the proposed project would address anticipated capacity issues during wet-weather events as identified in OC San's 2019 Master Plan Update (MPU) Report, which showed potential risk of sanitary sewer overflows between maintenance holes (MH) #SAR250-0280 and #SAR250-0085. The existing Taft Branch sewer is a vitrified clay gravity sewer (VCP), which varies in size from 12-inches to 18-inches and was built in 1960. Since that time, the surrounding area has grown significantly. The proposed project would provide an overall design solution to increase the capacity of the Taft Branch sewer

to convey wet-weather flows and replace or construct 39 maintenance holes to meet OC San and City of Orange current standards.

2.3 Project Location

The proposed project is located in the City of Orange, in Orange County, California (see **Figure 2-1**). The project would be constructed within the existing City of Orange right-of-way, along Meats Avenue from west of Santiago Boulevard to Breckenridge Street, south along Sacramento Street, west along Taft Avenue, crossing California Department of Transportation (Caltrans) State Route 55, south along Tustin Street, and west along Taft Avenue to Glassell Street (see **Figure 2-2**).

2.3.1 Environmental Setting

The proposed project is located in both dense residential and commercial areas and crosses State Route 55. The project area setting is fully built-out. Surrounding land uses include commercial, residential, and public facilities.

2.3.2 Sensitive Receptors

Sensitive receptors within the project vicinity include the single-family and multi-family residences on either side of the proposed alignment along Taft Avenue, Sacramento Street, Breckenridge Street and Meats Avenue. In addition, there are over a dozen schools and/or faith-based facilities located within one quarter mile of the project site.

2.3.3 Utilities

Electrical service in the proposed project area is provided by Southern California Edison (SCE). Natural gas service for the proposed project area is provided by the Southern California Gas Company. City of Orange provides water and wastewater services in the project area. OC San is the regional wastewater collection agency. Existing facilities for these utilities are located throughout the vicinity of the proposed project. There is also a 79-3/4" diameter Metropolitan Water District of Southern California (MWD) feeder pipe along Taft Avenue and Tustin Street, which the proposed project would cross.

2.3.4 Transportation

The proposed project alignment would cross under State Route 55. The major roadways in the proposed project vicinity are Taft Avenue, Tustin Street and Meats Avenue. West of the proposed project alignment, immediately west of the intersection of Taft Avenue and Glassell Street, are railroad tracks maintained by Union Pacific Railroad (UPRR). Metrolink operates the Inland Empire – Orange County rail line along these tracks immediately west of the alignment. Bikeways also exist in the project vicinity. There is a Class 2 bike lane on both the north and south sides of Taft Avenue between Glassell Street and Tustin Street; along Taft Avenue between Tustin Street and Sacramento Street; along Meats Avenue between Breckenridge Street and Santiago Boulevard. Active bus routes in the area are operated by Orange County Transportation Authority (OCTA) and include routes 46, 50, 71, and 167 along Taft Avenue, Tustin Street and Meats Avenue.

2.3.5 Air Quality and Water Quality

The project is located within the jurisdiction of the South Coast Air Quality Management District (SCAQMD), within the South Coast Air Basin (SCAB) which is in nonattainment status for ozone and particulate matter

(SCAQMD 2017). The project site lies within the San Ana River watershed, (Santa Ana RWQCB 2015). Water quality is regulated by the Regional Water Quality Control Board (RWQCB), Santa Ana Region. Drainage facilities in the vicinity of the project include the Buckeye Drainage Channel crossing under Meats Avenue along State Route 55.

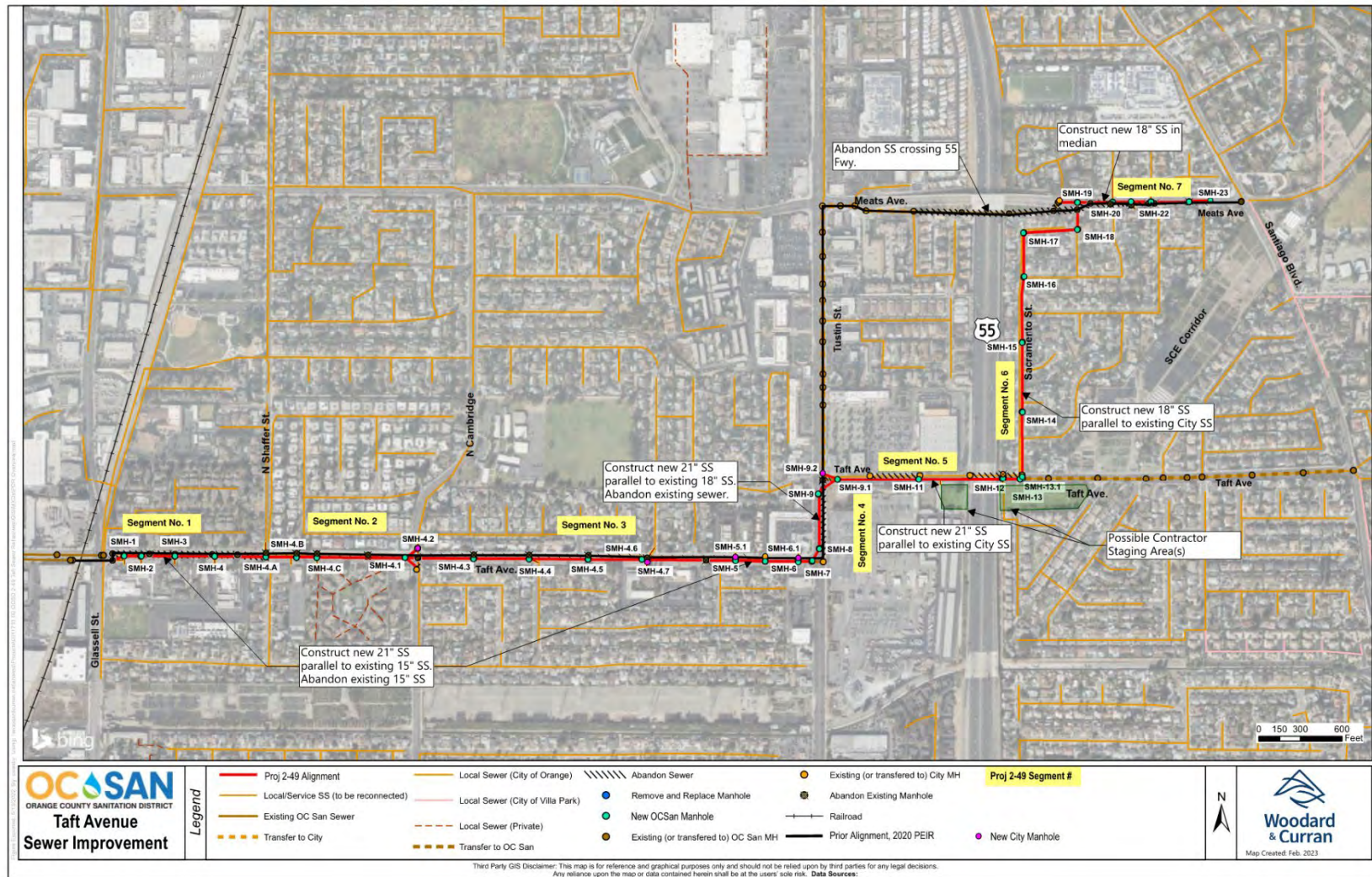
2.3.6 Geology

Regional geologic mapping indicates that the eastern portion of the alignment is underlain by Holocene and latest Pleistocene age young alluvial fan deposits consisting of gravel, sand, and silt. The western portion of the alignment is underlain by late to middle Pleistocene age old alluvial fan deposits generally consisting of reddish-brown gravel and sand.

Figure 2-1: Regional Location



Figure 2-2: Project Overview



2.3.7 Existing Site Conditions

At the western end of the proposed alignment, Taft Avenue consists of four lanes of traffic and a center turn-lane (median). There are sidewalks and bicycle lanes defined by pavement striping on both sides of the roadway. The speed limit is 40 mph. There are existing overhead electrical utility lines and streetlights along the entire segment. Land uses are a combination of commercial businesses, churches, private schools, single family residential and multi-family residential. See **Figure 2-3**.

In the central segment of the proposed alignment, along Tustin Street between Taft Avenue (south-west) and Taft Avenue (north-east), Tustin Street consists of five lanes of traffic and a center turn-lane (median). There are sidewalks on both sides of the roadway. There are no bicycle lanes defined. The speed limit is 40 mph. There are existing overhead electrical utility lines and streetlights along the entire segment. Land uses include commercial businesses and an SCE substation.

Along Taft Avenue to the northeast, the alignment crosses under State Route 55; there are no on-off ramps. The roadway consists of four lanes of traffic and a center turn-lane (median). There are sidewalks and bicycle lanes defined by pavement striping on both sides of the roadway. The speed limit is 35 mph. There are existing overhead electrical utility lines and streetlights along the entire segment. Land uses are commercial. See **Figure 2-4**.

At the northern end of the proposed alignment, Breckenridge Street and Sacramento Street consist of 2 lanes of traffic with no division. The speed limit is 25 mph. There are existing overhead electrical utility lines and streetlights along the entire segment. Land uses are single-family residential.

Meats Avenue consists of four lanes of traffic and a center turn-lane (median). There are sidewalks and bicycle lanes defined by pavement striping on both sides of the roadway. The speed limit is 35 mph. There are existing overhead electrical utility lines and streetlights along the entire segment. Land uses are single-family residential. See **Figure 2-5**.

Figure 2-3: Western portion of proposed alignment – representative photos



Figure 2-4: Central portion of proposed alignment – representative photos

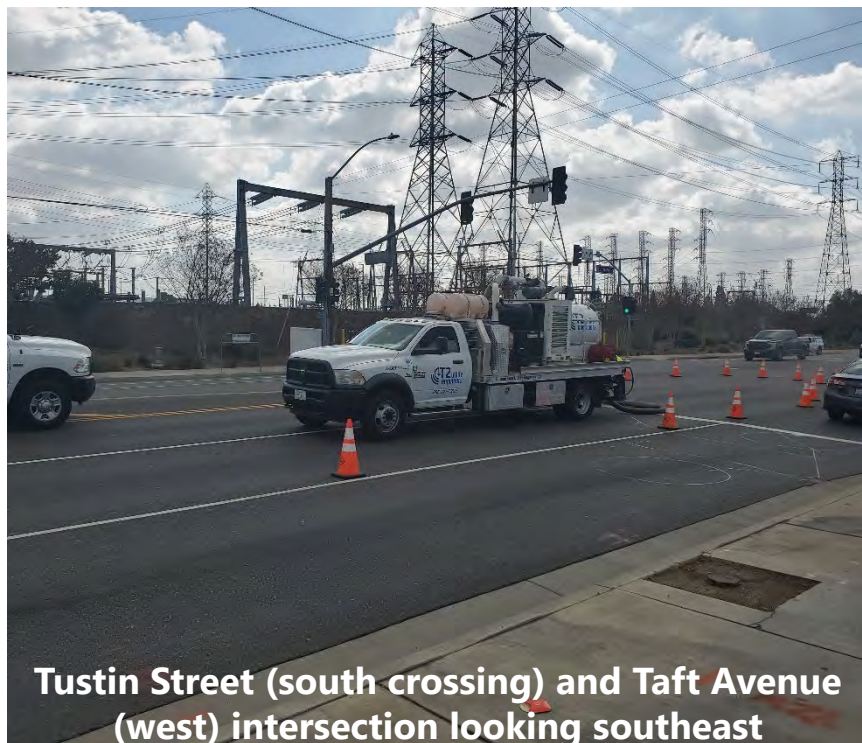
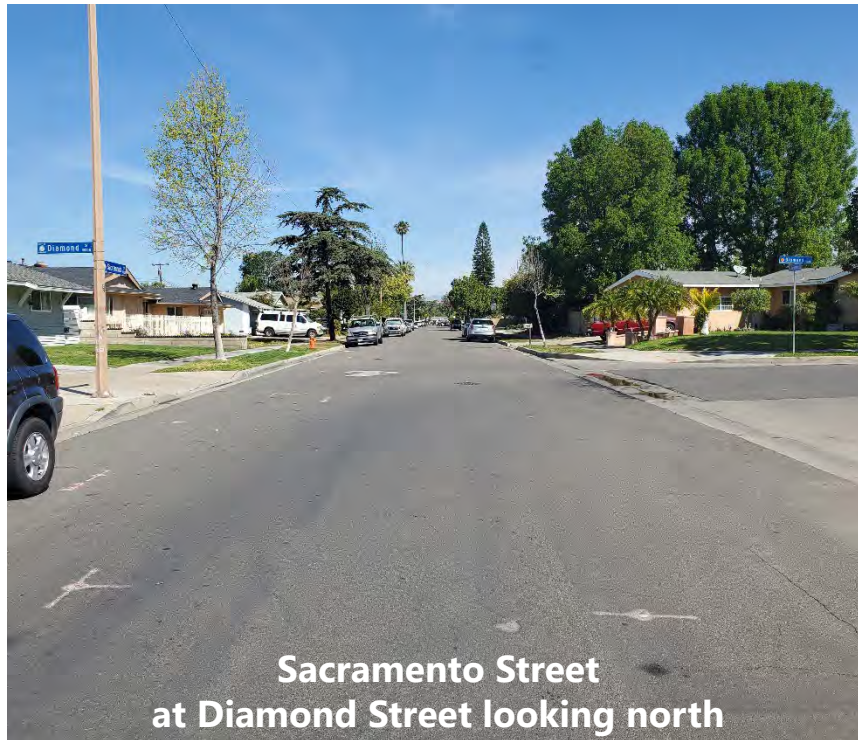


Figure 2-5: Northern portion of proposed alignment – representative photos



2.4 Proposed Project Description

The project would construct 10,780 linear feet of 18-inch and 21-inch sewer transmission pipelines to meet existing and anticipated growth and improve operational efficiency. Approximately 8,000 linear feet of existing 12-inch and 15-inch sewer transmission pipelines would be abandoned as part of this project. While the project would increase the capacity of a portion of the Taft Branch regional sewer pipeline, the capacity of OC San's wastewater collection and treatment plants will remain the same. In addition, the project would construct 420 linear feet of sewer laterals to connect City of Orange to the system ranging in size from 8 to 18 inches in diameter. Details are provided in the following sections.

Most of the alignment would be located in an industrial/ commercial neighborhood west of State Route 55 along Taft Avenue and Tustin Street. The alignment would be partially located in a residential neighborhood east of State Route 55 and bounded by Taft Avenue to the south. The alignment continues east where Sacramento Street becomes E. Brentford Avenue then north and continues along N. Breckenridge Street to Meats Avenue.

2.4.1 Project Details by Segment

Segments No.1, 2, 3: Taft Avenue west of Tustin Street to Glassell Street. The project would replace existing OC San sewer pipeline with approximately 5,100 linear feet of 21-inch sewer pipeline. Trenchless and open-cut construction methods are still being evaluated as part of the Preliminary Design Report. This portion of the project on Taft Avenue would be constructed in three segments for traffic control purposes: from Glassell Street to Shaffer Street; to Cambridge Street; and to Tustin Street. A total of 15 new sewer maintenance holes would be constructed. Additional City of Orange 8-inch laterals would be constructed within City of Orange right-of-way to connect to existing City laterals that would lose connection to the regional sewer line as a result of the project. This would involve construction of approximately 220 linear feet of 6-inch and 8-inch sewer laterals and 4 City maintenance holes associated with the laterals.

To control sewage flows during construction, OC San would maintain operation of the existing 15-inch sewer pipeline until the new pipeline is constructed. Temporary bypass pumps or flow-through plugs would be used to allow City of Orange sewer lateral pipes to continue to operate within the work zone. Bypass pump set-up #1 would be required on Taft Avenue near Glassell Street to allow the final connection from the new sewer pipeline to the existing sewer pipeline. Bypass pump set-up #2 would be required along Shaffer Street at Glendale Drive to divert sewage flow away from Taft Avenue during construction. Bypass pump set-up #3 would be required behind the sidewalk on Tustin Street and Taft Avenue to control flows west on Taft Avenue. Three smaller bypass set-ups will be required to pick-up single services along Taft Avenue. Ultimately, the bypass location would be chosen by the contractor.

A total of 5,200 linear feet of existing OC San 15-inch sewer pipeline would be abandoned in these segments along with 20 existing maintenance holes and approximately 300 linear feet of 6-inch and 8-inch sewer laterals.

Segment No. 4: Tustin Street between Taft Avenue west and Taft Avenue east. The project would construct a new sewer to replace existing OC San 18-inch sewer pipeline with approximately 500 linear feet of 21-inch sewer pipeline. Open-cut construction methods for this segment of the alignment are anticipated and potential impacts are analyzed in this IS/MND. Three new sewer maintenance holes would be constructed and one maintenance hole would be demolished. In addition, the project would construct approximately

80 linear feet of 18-inch sewer laterals to reconnect City laterals that would lose connection to the regional line as a result of the project and construct 1 new City of Orange maintenance hole associated with the laterals. To control sewage flow during construction, OC San would maintain the operation of the existing 15-inch sewer pipeline during construction.

A total of 580 linear feet of existing OC San 18-inch sewer pipeline would be abandoned in this segment along with 1 existing maintenance hole. Segment No. 5: Taft Avenue east of Tustin Street to Sacramento Street. The project would construct approximately 1,400 linear feet of new 21-inch sewer pipeline parallel to the existing City of Orange 12-inch sewer. Trenchless and open-cut construction methods are still being evaluated as part of the Preliminary Design Report. Five maintenance holes would be constructed and connected to the 21-inch sewer pipeline via City laterals constructed in the right-of-way. To control sewage flow during construction, OC San would maintain the operation of the existing 12-inch sewer pipeline during construction.

A total of 790 linear feet of existing City of Orange 12-inch sewer pipeline would be abandoned in this segment along with 1 existing maintenance hole. Segment No. 6: Sacramento Street, E. Brentford Avenue and N. Breckenridge Street. The project would construct approximately 2,300 linear feet of 18-inch sewer parallel to the existing City of Orange 8-inch sewer pipeline along Sacramento Street, E. Brentford Avenue and N. Breckenridge Street. Five new maintenance holes would be constructed with 60-inch barrels to conform to OC San standards. To control sewage flow during construction, OC San would maintain the operation of the existing 8-inch sewer pipeline during construction.

Segment No. 7: Meats Avenue. From Breckenridge Street to Santiago Boulevard, the project would replace existing OC San 12-inch sewer pipeline with approximately 1,400 linear feet of a new parallel 18-inch sewer pipeline. Open-cut construction methods for this segment of the alignment are anticipated and potential impacts are analyzed in this IS/MND. Three new sewer maintenance holes would be constructed and two maintenance holes would be upsized from 48-inch to 60-inch barrels to meet OC San requirements. Six maintenance holes are proposed to be removed as part of this project. Flows from N. Pami Circle would be rerouted south towards N. Breckenridge Street, and approximately 120 linear feet of new 8-inch sewer would be constructed between the existing City of Orange maintenance hole to a new maintenance hole. To control sewage flow during construction, OC San would maintain the operation of the existing 12-inch sewer pipeline during construction.

A total of 960 linear feet of existing OC San 12-inch sewer pipeline would be abandoned in this segment along with 7 existing maintenance holes. 1,230 linear feet of existing OC San 12-inch sewer pipeline adjacent to Meats Avenue crossing State Route 55 would also be abandoned along with 3 existing maintenance holes.

Construction of each OC San pipeline segment would proceed in the following sequence with average trench invert depth as shown in **Table 2-1**.

Table 2-1: Construction Sequencing and Average Depth of Cover

Segment	Location	Activity	Length (LF)	Invert Depth (ft)	Construction Hours *
1	Taft Ave. / Glassel St.	Replace (E) 15-inch SS with 21-inch SS	1,150	17	Day-time, Monday – Friday, 8:30 am-4:30 pm
2	Taft Ave. / Cambridge St.	Replace (E) 15-inch SS with 21-inch SS	1,450	16	Day-time, Monday – Friday, 8:30 am-4:30 pm
3	Taft Ave. / Tustin St.	Construct (N) 21-inch SS	2,500	13	Day-time, Monday – Friday, 8:30 am-4:30 pm
4	Tustin St.	Replace (E) 18-inch SS with 21-inch SS	500	12	Night-time, Monday – Friday, 9:00 pm-5:00 am
5	Taft Ave. (east)	Replace (E) 12-inch SS with 21-inch SS	1,400	23	Day-time, Monday – Friday, 8:30 am-4:30 pm
6	Sacramento St.	Construct (N) 18-inch SS	2,300	17	Day-time, Monday – Friday, 8:30 am-4:30 pm
7	Meats Ave.	Replace (E) 12-inch SS with 18-inch SS	1,400	13	Day-time, Monday – Friday, 8:30 am-4:30 pm

* City of Orange preliminary permitting for this project has indicated work hours shall be 8:30 am to 4:30 pm which varies from OC San General Requirements.

2.4.2 Maintenance Hole Construction

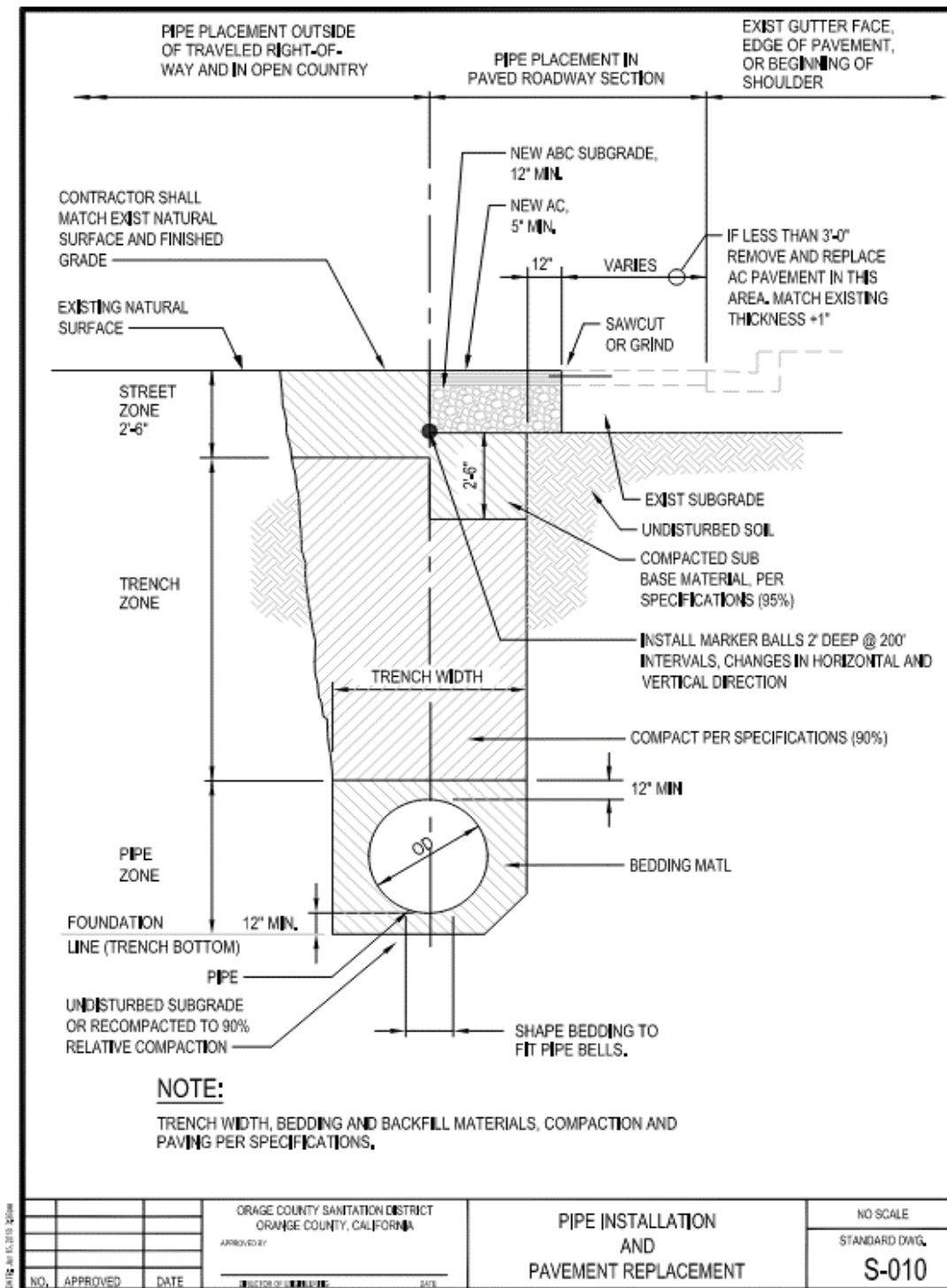
Along the project alignment, a total of 39 maintenance holes would be constructed as follows:

- 31 existing 48-inch barrel OC San maintenance holes would be removed.
- 34 new 60-inch OC San maintenance holes would be constructed.
- 1 existing City of Orange Maintenance hole would be removed.
- 5 new 48-inch barrel City of Orange maintenance holes would be constructed

2.4.3 Pipeline Construction

The proposed 10,780 linear foot sewer pipeline and 420 feet of laterals would be placed within the City of Orange right-of-way using a combination of open-trench and trenchless construction methods. The trench width would be 4-6 feet, while the depth would range from 8- to 25 -feet. The pipeline alignment would be designed to avoid conflict with existing utilities. The trenching cross section would resemble a "T" (see **Figure 2-6**) with the pipeline trench at the center being up to 72-inches wide and 8-25 feet deep, and the City's required paving restoration area being 12 inches wide and 8 inches deep on either side of the trench. The construction contractor would grind and overlay a lane width, or more, depending on the exact location where the alignment sits within the street. The width of resurfacing would be up to the nearest lane line or gutter in accordance with the City of Orange Trench Backfill and Roadway Repair Standard Plans.

Figure 2-6: Proposed Alignment Representative Cross-Section



Source: Orange County Sanitation District Standard Drawing S-010, Design and Construction Requirements Sanitary Sewers (Chapter 12), revised February 2014.

Construction of the pipelines would require the estimated construction equipment shown in **Table 2-2**.

Table 2-2: Construction Vehicle Fleet for Pipelines

Equipment	Number Required for Pipelines
Backhoe/Loader	1
Hydraulic Excavator	1
Crane	1
Drill Rig (if trenchless techniques used)	1
Utility Truck	1
Water Truck	1
Welder	1
Compressor	1
Pump	1
Pick-up Trucks	2
Dump Truck	2
Concrete Saw	1
Pavement Breaker	1
Sweeper	1
Paver	1
Generator	1

The total estimated volume of material to be excavated and removed from construction of the pipeline is approximately 34,600 cubic yards (4 to 6 ft pipeline trench width, 8 to 25 feet trench depth, 11,200 feet trench length, including laterals). This assumes 21-inch pipeline with 8-inches of clearance to either side of the pipe. Excavated material may be reused onsite as trench backfill; however, for the purposes of this analysis, it is conservatively assumed that all excavated trench material would be hauled off site and new fill material would be imported. After construction is complete, all pipeline construction areas would be restored to pre-construction conditions (i.e., no permanent disturbance footprint). The width of resurfacing would be up to the nearest lane line or gutter in accordance with the City of Orange Trench Backfill and Roadway Repair Standard Plans.

A total of 8,000 linear feet of existing OC San sewer transmission pipelines would be abandoned along with 820 linear feet of City of Orange service lines. Thirty-one OC San and one City of Orange sewer maintenance holes would also be abandoned. Abandoning existing sewer pipelines in place involves filling the pipeline with controlled low strength material cement and a concrete plug; filling of sewer lines is completed by injecting from maintenance hole to maintenance hole with no excavation. Abandoning existing maintenance holes involves removing the maintenance hole frame and cover to 5-feet below grade and filling the remaining maintenance hole with crushed aggregate base.

2.4.4 Temporary Bypass and Plug Systems

To control sewage flows during construction, OC San would establish temporary bypass pumping or flow-through plug systems. Temporary aboveground sewage bypass lines would be installed between key upstream to downstream maintenance holes; placing diesel powered self-priming pumps near the upstream

maintenance hole location. Where possible, based on the segment location, the aboveground bypass line follows the sewer line and is laid in street gutters on the road shoulder within the street right-of-way or it will be placed within the contractor's work-zone. However, certain segments of bypass line may need to diverge from the sewer line and work-zone. Where necessary, the temporary bypass line is protected from vehicular traffic and other potential damage by placing it between two concrete traffic barriers (K-rails) or between one K-rail and an adjacent street gutter. Although aboveground alignments are preferred for the temporary bypass pipelines, certain segments must be buried in shallow trenches within the existing roadways to avoid traffic conflicts. These trenches are typically 18 inches deep, not to exceed the depth of the existing road base, and they would be backfilled or covered with metal plates to allow continued vehicle access of the affected area. Trench soil material would be stored and covered onsite; no soil hauling trips for export of trench soil or import of new material would be required. Once the bypass is functional, the main sewer line would be rehabilitated or replaced. Once construction of the sewer pipeline is complete, the temporary bypass infrastructure would be removed, the trench soil – if any – would be backfilled, and the roadway or sidewalk would be restored to original conditions. Details for the project's bypass system would be developed during the final design and encroachment permits obtained with City of Orange and City of Villa Park as required.

2.4.5 Construction Schedule

Project construction is anticipated to begin in approximately January 2024 and continue until December 2025. Construction would include the following four phases:

- Mobilization/utility potholing – January 2024 to April 2024
- Trenching/Pipeline/Maintenance hole installation – May 2024 to June 2025. The pipelines would be constructed at an average rate of 50 linear feet per day, depending on the conditions, extent of existing utilities and traffic control, and permitted work hours. Maintenance holes would be constructed by a second crew following behind the pipeline installation. Therefore, the total duration of construction for the pipeline is estimated to last approximately 12 months.
- Final paving/restoration – July 2025 to October 2025
- Demobilization – November/December 2025

2.4.6 Equipment Staging Areas

Two construction staging area options are included in this environmental analysis; however, the size, location, and number of staging areas would be finalized as part of pre-construction. For the purposes of this analysis, it was assumed each construction staging area would be up to 200 by 200 feet in size and located in vacant land owned by SCE with access to the proposed alignment. The two optional locations for the staging areas are shown in **Figure 2-2**. Access would be from Taft Avenue. The staging area sites are approximately 0.5-acre and 2.0-acres in size.

If the identified staging area options cannot accommodate all equipment storage/staging for the proposed project, the construction contractor may use the Taft Avenue right-of-way for the purposes of equipment storage, staging, and/or pipe stringing. Other existing OC San or City property would be utilized as necessary for staging and intermediate storage for the installation of the sewer pipelines, or the contractor would be responsible for securing suitable temporary equipment storage/staging site(s) prior to

construction and implementing applicable environmental commitments (see *Section 2.6*) at the staging area(s).

2.5 Operations

The pipeline and maintenance holes would not be associated with long-term energy usage or additional OC San operations and maintenance (O&M) activities. Project O&M activities would include inspection and repair, as necessary, of pipeline and maintenance holes.

2.6 Environmental Commitments

The OC San General Requirements contain references to various standards, standard specifications, codes, practices, and requirements that are incorporated into the design and construction of all OC San projects. The following measures are construction best management practices (BMPs), consistent with the OC San General Requirements, that would be implemented as part of the proposed project:

- The design and construction of the facilities will be based on the geotechnical investigation report to minimize geological risk.
- If groundwater is encountered during construction, dewatering discharges will be disposed of in accordance with applicable state and local requirements.
- All construction work will require the contractor to implement fire hazard reduction measures, such as having fire extinguishers located onsite.
- Open trenches will be covered with recessed trench plates during non-construction periods in accordance with encroachment permits.
- Construction will comply with SCAQMD Rule 403 Fugitive Dust Control requirements.
- Sewage control will include a combination of bypass pumping (redundant pumps), spill containment for bypass pumps, temporary plugs, and nighttime construction. Sewer systems experience smaller flows at night compared to during the day, which allows the contractor a better opportunity to control flows.
- Specifications will require the contractor to prepare a Stormwater Pollution Prevention Plan (SWPPP). In accordance with the SWPPP, the contractor would implement BMPs during construction to control water quality of stormwater discharges offsite, such as site management “housekeeping,” erosion control, sediment control, tracking control and wind erosion control.
- The contractor will be required to minimize traffic interruptions, and to provide unobstructed access to fire hydrants, fire stations, police stations, hospitals, and any other emergency services.
- The contractor will prepare a traffic control plan, which will be provided to local police and fire departments and public transit facilities.

2.7 Required Permits and Approvals

Anticipated permits are identified in **Table 2-3**. OC San is negotiating an agreement with City of Orange for transfer of existing pipeline maintenance for sewers along Tustin Street and Taft Avenue (east). A California State Water Resources Control Board Division of Drinking Water Waiver is not anticipated because the proposed project’s pipelines would be compliant with California’s Waterworks Standards (Section 64572, Title 22, CCR) parallel and perpendicular separation criteria; however, the need to apply for a waiver would be determined later in the design stage.

Table 2-3: Permits and Approvals

Agency	Permit/Approval
City of Orange	Encroachment Permit
City of Orange	Review and approval of engineering plans and specifications, traffic control plans and/or contractor shop drawings
City of Villa Park	Encroachment Permit
State Water Resources Control Board	NPDES Construction General Permit for Storm Water Discharges (SWPPP)
State Water Resources Control Board	Division of Drinking Water Title 22 for pipeline separation
California Occupational Safety and Health Administration	Trenching/Shoring Permit
Union Pacific Railroad/ Metrolink	Acceptance of Traffic Control Plan
Metropolitan Water District of Southern California	Orange County Feeder Pipeline crossing approval
Caltrans	Encroachment Permit

3. ENVIRONMENTAL CHECKLIST FORM

1. **Project title:** Taft Sewer Improvement Project
2. **Lead agency name and address:** Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
3. **Contact person and phone number:** Kevin Hadden
Principal Staff Analyst
CEQA@OCSAN.GOV
(714) 593-7462
4. **Project location:** City of Orange,
Orange, California
5. **Project sponsor's name and address:** Same as Lead Agency
6. **General plan designations:** City of Orange right-of-way, Residential, Commercial
7. **Zoning:** City of Orange roadway right-of-way, Light
Manufacturing, Single Family Residential (8000
square feet)
8. **Description of project:** The Taft Sewer Improvement Project ("project", "proposed project") involves construction and operation of approximately 11,000 linear feet of vitrified clay (VC) sewer pipelines, ranging in size from 8 to 21 inches in diameter, and 39 new maintenance holes. The project would connect to existing City of Orange sewer at the intersection of Meats Avenue and Santiago Boulevard and to the existing OC San sewer at the intersection of Taft Avenue and Glassell Street. The project would abandon approximately 8,000 feet of existing sewer pipeline and would remove 32 existing maintenance holes.
9. **Surrounding land uses and setting:** The project would be constructed entirely within the existing City of Orange right-of-way. The project area is fully built-out. Surrounding land uses include commercial, residential, industrial, and public facilities.
10. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)**
- City of Orange: Encroachment Permit
 - City of Orange: Review and approval of engineering plans and specifications, traffic control plans and/or contractor shop drawings
 - State Water Resources Control Board: NPDES Construction General Permit for Storm Water Discharges (SWPPP)
 - State Water Resources Control Board: Division of Drinking Water Title 22 for pipeline separation

- California Occupational Safety and Health Administration: Trenching/Shoring Permit
- Union Pacific Railroad/ Metrolink: Traffic control plan acceptance
- Metropolitan Water District of Southern California: Orange County Feeder Pipeline crossing approval
- City of Villa Park: Encroachment Permit
- Caltrans: Encroachment Permit

11. Have California Native American tribes traditionally and culturally affiliated with the Project area requested consultation pursuant to Public Resources Code section 2180.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

OC San has consulted with Native American tribal representatives through written correspondence, based on a contact list of tribes who indicated to OC San that they are interested in receiving notification. Additionally, OC San staff has undertaken consultation with representatives from the Gabrieleño Band of Mission Indians – Kizh Nation and Juaneño Band of Mission Indians, Acjachemen Nation- Belardes to discuss the project and potential effects to tribal cultural resources.

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|--|---|--|
| <input checked="" type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input checked="" type="checkbox"/> Geology/Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards and Hazardous Materials |
| <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources |
| <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input checked="" type="checkbox"/> Transportation | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Wildfire | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION: (To be completed by Lead Agency)

On the basis of this initial evaluation:

- ☐ I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION has will been prepared.
- ☐ I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

Signature

Date

Printed Name

Title

3.1 Aesthetics

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
Except as provided in Public Resources Code Section 21099, would the Project:				
a) Have a substantial adverse effect on a scenic vista?	[]	[]	[X]	[]
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	[]	[]	[]	[X]
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?	[]	[]	[X]	[]
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	[]	[X]	[]	[]

Discussion

The proposed project is located in the OC San service area in the City of Orange. Portions of the City of Orange are characterized by scenic vistas that include undeveloped hillsides, ridgelines, or open space areas that provide a unifying visual backdrop to the urban environment. The eastern boundary of the City of Orange is formed by the Santa Ana Mountains and its scenic resources which include Irvine Lake, grassy valleys, rugged hillsides, rock outcroppings, and winding canyons. In its General Plan, the City of Orange recognizes the contribution of viewsheds to the City's quality of life and identifies the preservation of visual and aesthetic resources as a primary goal (City of Orange 2015a).

As shown in the photographs of the existing conditions of the site (*Section 2.3.7 Existing Site Conditions*), the new sewer transmission pipeline would be constructed within City of Orange streets that support intermittent views of the Santa Ana Mountains for motorists and pedestrians. However, the foothills of the

Santa Ana Mountains are over three miles away from the project area and views from the street are largely obstructed by existing buildings, powerlines, and trees (**Figure 2-3, Figure 2-4, Figure 2-5**).

The City of Orange and Orange County municipal codes each provide guidelines for proposed permanent lighting with the purpose of reducing unnecessary light pollution while promoting safety and aesthetics. City of Orange Municipal Code section 17.12.030 states that lighting on any premises shall be directed, controlled, screened or shaded in such a manner so as not to shine directly on surrounding premises. Furthermore, lighting on any residential property shall be controlled so as to prevent glare or direct illumination of any public sidewalk or thoroughfares (City of Orange, no date ("nd")). Orange County Municipal Code section 7-9-67 Lighting and Illumination states that all lighting shall be designed and located so as to confine direct rays to the premises (Orange County nd). These codes do not apply to temporary construction-related lighting and glare.

Caltrans manages the State Scenic Highway Program, which was created by the State Legislature in 1963 with the purpose of protecting the natural scenic beauty of California highways. Caltrans assigns responsibility for the regulation of land use and development along State Scenic Highways to the appropriate State and local governmental agencies. Highways receive a designation based on how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. The nearest State-designated scenic highway is State Route 91 (SR-91), approximately 1.5 miles northeast of the project area (Caltrans 2018). There are no state-designated or eligible scenic highways within the City of Orange.

a) Have a substantial adverse effect on a scenic vista?

The proposed project does not include any aboveground components and would not be visible upon completion with the exception of the maintenance holes within roadways. Therefore, the primary scenic impairments associated with the project would be temporary and would occur during the construction phase. During construction, intermittent scenic views of the Santa Ana mountains (primarily from local roadways of the proposed alignment, sidewalks, bicycle lanes, and adjacent land uses) would be temporarily obstructed by construction workers, equipment (such as the backhoe, excavator, crane, or drill rig listed in **Table 2-2**), and vehicles. Although construction activities would result in visual changes, these potential visual impacts would be short-term and would not occur in the same location over the 24-month construction period. Temporary impacts on scenic vistas would cease upon completion of construction near each vantage point, as construction activities move along the pipeline alignment. Once the project is completed, the area of temporary disturbance would be restored to its original condition and would not obstruct any long-term views. Thus, the project would have no long-term impact on scenic vistas. Impacts would be less than significant.

Mitigation Measures

None required.

Significance Determination

Less than significant.

b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

The proposed alignment is not located within the viewshed of a State scenic highway. Therefore, there would be no impact on scenic resources associated with a State scenic highway.

Mitigation Measures

None required.

Significance Determination

No impact.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The proposed alignment of the project is located within developed and paved public roads and right-of-ways. While implementation of the project would not result in any permanent aboveground components, construction activities such as disturbed roadways, excavation, trenching, placement of materials and staging of equipment may result in short-term impacts regarding the visual character or quality of the project area. Public views in the project area and vicinity include those from roadways, sidewalks and bicycle lanes. Public views of the project construction from roadways would be fleeting – on the order of seconds or minutes – while public views of the construction from sidewalks and bicycle lanes would be longer. This short-term effect on visual continuity is considered less than significant because after construction is complete, all pipeline construction areas would be restored to pre-construction conditions (i.e., no permanent disturbance footprint). The sewer pipeline would not permanently impact the existing visual character or quality of the project site and its surroundings. Project impacts on visual character and public views would be less than significant.

Mitigation Measures

None required.

Significance Determination

Less than significant.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Project construction would occur within daytime (8:30 am-4:30 pm) and nighttime (9:00 pm-5:00 am) hours, depending on project segment, and would include vehicles, equipment, and safety lighting that could temporarily create a minor new source of light and glare (*Section 2.4.5 Construction Schedule*). As sunlight reflects off metallic and glass construction equipment, momentary instances of glare could affect nearby receptors; however, any reflected glare would not be concentrated and would cease as pedestrians, motorists, and construction equipment move along the project alignment. In addition, the project alignment and staging areas are located within an urbanized area with existing sources of light and glare, including

vehicle and building windows, structures with polished metal exteriors, streetlights within roadways, parking lots and walkways and light emitted from residential and non-residential buildings. The presence of construction vehicles and equipment during project construction would not generate substantial new sources of glare.

While construction activities would have a minimal impact from increased glare, construction lighting impacts could result in temporarily significant impacts due to the potential for light to spill over and disturb sensitive receptors, such as residences along Taft Avenue, Sacramento Street, Breckenridge Street and Meats Avenue. Although existing municipal codes include measures to reduce unnecessary glare and light pollution, these codes do not apply to temporary construction-related lighting and glare. **Mitigation Measure AES-1** would be implemented to reduce the potential impact of construction lighting during nighttime construction.

Construction would be temporary, and equipment would be removed once site restoration is complete. No permanent lights or sources of glare would be installed as part of the project and there would be no long-term impact to daytime and nighttime views in the area. With implementation of **Mitigation Measure AES-1**, impacts would be less than significant.

Mitigation Measures

The following mitigation measure shall be incorporated into the project to reduce potential impacts from light spillage and disturbance to sensitive receptors in the project area during nighttime construction. The following mitigation measure was identified in the FMP PEIR as Mitigation Measure AES-2. The proposed project's aesthetics impacts would be less than significant with mitigation incorporated.

Mitigation Measure AES-1: Construction Lighting.

Should nighttime construction be required, a construction safety lighting plan shall be submitted to the OC San Director of Engineering for review and approval prior to any nighttime construction activities. The Construction Safety Lighting Plan shall require that all construction-related lighting fixtures (including portable fixtures) shall be oriented downward and away from adjacent sensitive areas (including residential and biologically sensitive areas) and that all lighting shall consist of the minimal wattage necessary to provide safety at the construction site.

Significance Determination

Less than significant with mitigation incorporated.

3.2 Agriculture and Forestry Resources

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
Would the Project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	[]	[]	[]	[X]
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	[]	[]	[]	[X]
c) Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	[]	[]	[]	[X]
d) Result in the loss of forest land or conversion of forest land to non-forest use?	[]	[]	[]	[X]
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	[]	[]	[]	[X]

Discussion

The proposed project would be located solely within the existing City of Orange right-of-way. The City of Orange does not have any zoning classifications for forestland, timberland, or timberland production and there is no land under a Williamson Act contract (City of Orange 2013). As shown in **Figure 3-1** there are no prime, unique, or farmland of statewide importance within the proposed alignment or staging areas as

classified by the California Department of Conservation (CDOC) Farmland Mapping and Monitoring Program (CDOC 2018).

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

The proposed alignment would be located within urban and built-up land as classified by the California Department of Conservation (**Figure 3-1**). Although construction activities at the intersection of Meats Avenue and Santiago Boulevard would be nearly adjacent to land classified as Unique Farmland, the pipeline would be entirely within the existing roadway right-of-way and would avoid this land. No project construction staging areas are proposed within the farmland area. The proposed project would not convert farmland to non-agricultural use; therefore, there would be no impact.

Mitigation Measures

None required.

Significance Determination

No impact.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

The proposed project would not be located on land zoned for agricultural use (City of Orange 2020) or protected by a Williamson Act Contract (City of Orange 2013). Therefore, no impact would occur as a result of the proposed project.

Mitigation Measures

None required.

Significance Determination

No impact.

c) Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

There is no land zoned or designated for forest land or timberland within the City of Orange (City of Orange 2013). Therefore, the proposed project would have no impact.

Mitigation Measures

None required.

Significance Determination

No impact.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

There is no designated forest land or timberland within the City of Orange (City of Orange 2013). There are no forestry or timberland resources in the project area. Therefore, the proposed project would have no impact related to the loss of forest land or timberland.

Mitigation Measures

None required.

Significance Determination

No impact.

e) Involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

The project area is entirely within existing City of Orange right-of-way, and adjacent land uses consist of urban development such as residences and commercial buildings (City of Orange 2020). After construction is complete, all pipeline construction areas would be restored to pre-construction conditions (i.e. no permanent disturbance footprint). Additionally, the proposed project would primarily serve existing and planned populations, and would not induce growth (refer to *Section 3.14 Population and Housing*). The proposed project would not result in land use changes and would, therefore, not convert important farmland to a non-agricultural use, conflict with zoning regulations, or result in other changes that would indirectly result in conversion of nearby farmland to non-agricultural use. There are no Williamson Act lands within the project area. Therefore, the proposed project would not have potential to convert or result in the conversion of important farmland or Williamson Act lands to non-agricultural uses. There would be no impacts.

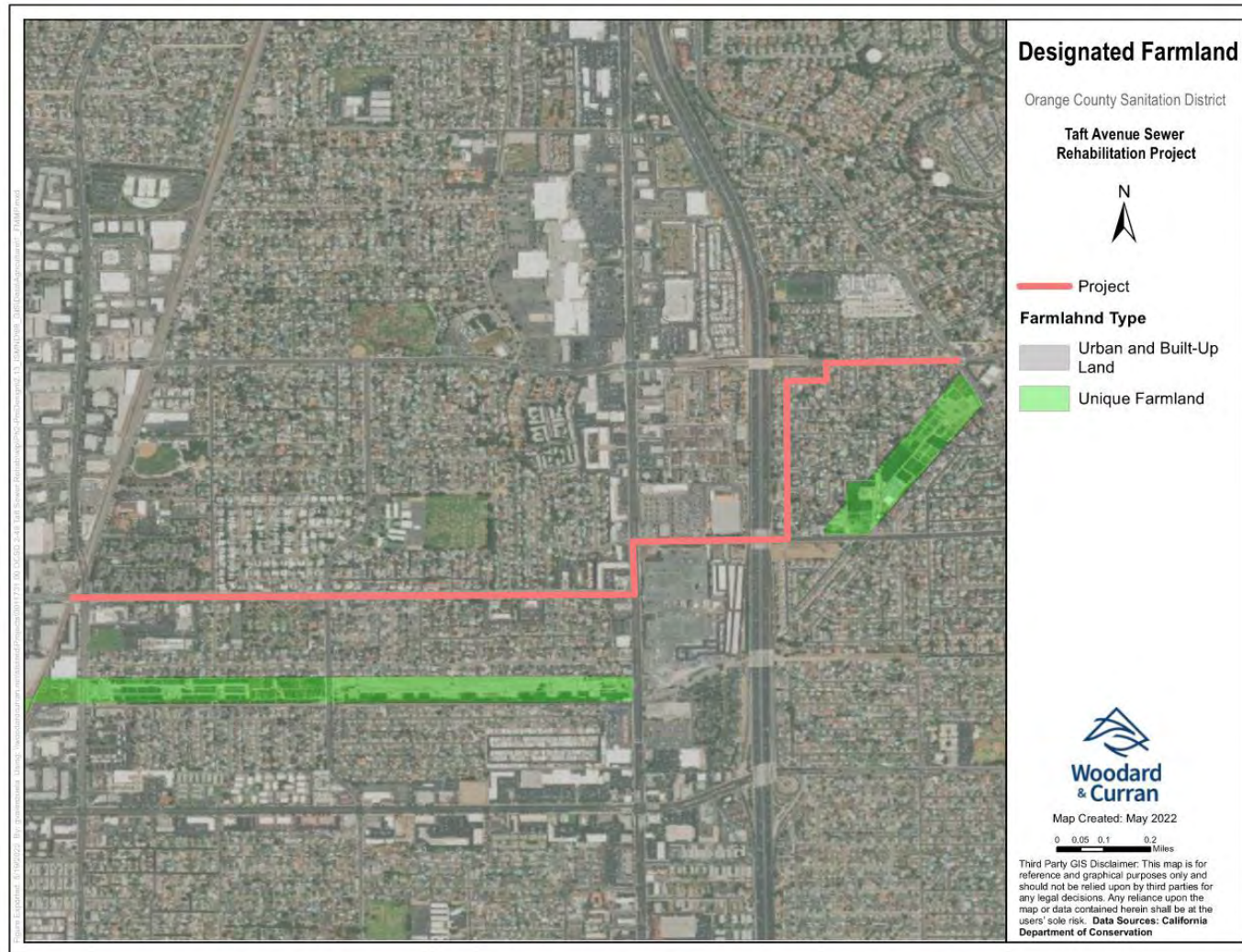
Mitigation Measures

None required.

Significance Determination

No impact.

Figure 3-1: Farmland



3.3 Air Quality

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
Would the Project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	[]	[]	[X]	[]
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non- attainment under an applicable federal or state ambient air quality standard?	[]	[X]	[]	[]
c) Expose sensitive receptors to substantial pollutant concentrations?	[]	[X]	[]	[]
d) Result in other emissions (such as those leading to odors or adversely affecting a substantial number of people?	[]	[]	[X]	[]

Discussion

The OC San service area spans 20 cities within Orange County. The OC San service area, including the project area, is located within the SCAB, which is regulated by the SCAQMD. The SCAQMD monitors air pollutant levels to ensure the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) are met and, if they are not met, to develop strategies to meet the standards. Air pollution in the project area is monitored at stations in Anaheim, La Habra, and Mission Viejo, located approximately five, 10, and 15 miles from the project area, respectively.

The NAAQS, which are required to be set by the United States Environmental Protection Agency (US EPA) under the Clean Air Act, provide public health protection, including protecting the health of sensitive populations such as asthmatics, children, and the elderly (US EPA 2021). Similarly, the CAAQS are established to protect the health of the most sensitive groups and are mandated by State law. US EPA has set NAAQS for six pollutants, which are called "criteria pollutants:" carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), ozone (O₃), Particulate Matter (PM₁₀ and PM_{2.5}), and sulfur dioxide (SO₂). In addition to these, California has added three criteria pollutants: hydrogen sulfide (H₂S), visibility reducing particles, and vinyl chloride. In total, California regulates about 200 different chemicals, referred to as toxic air contaminants (TACs) (CARB 2022).

Depending on whether or not the NAAQS or CAAQS are met or exceeded, the SCAB is classified as being in "attainment" or "nonattainment." The 2016 Air Quality Management Plan (AQMP; SCAQMD 2017) assesses the attainment status of the SCAB and is summarized in **Table 3-1**. As shown therein, the SCAB is in nonattainment for the State 1-Hour Ozone, 8-Hour Ozone, PM₁₀-24 hour, PM₁₀-Annual, and PM_{2.5}-Annual requirements and the Federal 1-hour Ozone, 8-Hour Ozone, PM_{2.5}-24 hour, PM_{2.5}-Annual, and lead requirements. Thus, the SCAB is required to implement strategies that would reduce pollutant levels to recognized standards, which is done through the Clean Communities Plan (formerly known as the Air Toxics Control Plan). The Clean Communities Plan is designed to examine the overall direction of the SCAQMD's air toxics control program and includes control strategies aimed to reduce toxic emissions.

Table 3-1: Criteria Pollutant Attainment Status – SCAB

Criteria Pollutant	State CAAQS	Federal (NAAQS)
1-Hour Ozone	Nonattainment	Nonattainment (Extreme)
8-Hour Ozone	Nonattainment	Nonattainment (Extreme)
CO	Attainment	Attainment (Maintenance)
NO ₂	Attainment	Attainment (Maintenance)
SO ₂	Attainment	Attainment
PM ₁₀ – 24 hour	Nonattainment	Attainment (Maintenance)
PM ₁₀ – Annual	Nonattainment	No Criteria Defined
PM _{2.5} – 24 hour	No Criteria Defined	Nonattainment (Serious)
PM _{2.5} – Annual	Nonattainment	Nonattainment (Serious)
Lead	No Criteria Defined	Nonattainment (partial)
Hydrogen Sulfide (H ₂ S)	Attainment	No Criteria Defined
Sulfates	Attainment	No Criteria Defined
Vinyl Chloride	Attainment	No Criteria Defined

Source: SCAQMD 2018

The SCAQMD provides numerical thresholds to analyze the significance of a project's construction and operational emissions on regional air quality. These thresholds are designed such that a project consistent with the thresholds would not have an individually or cumulatively significant impact on the SCAB's air quality. In addition to Criteria Air Pollutants, thresholds have been set for nitrogen oxides (NO_x) and volatile organic compounds (VOCs), also referred to as reactive organic gases (ROG), which are O₃ precursors. These thresholds are listed in **Table 3-2**.

Table 3-2: SCAQMD Air Quality Significance Thresholds

Pollutant	Mass Thresholds – Construction Thresholds (pounds/day)	Mass Thresholds – Operation Thresholds (pounds/day)
NO _x	100	55
VOC	75	55
PM ₁₀	150	150
PM _{2.5}	55	55
SO _x	150	150
CO	550	550
Lead	3	3
Toxic Air Contaminants	<ul style="list-style-type: none"> • Maximum Incremental Cancer Risk ≥ 10 in 1 million • Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) • Chronic & Acute Hazard Index ≥ 1.0 (project increment) 	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	

Source: SCAQMD 2023

In addition, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to concern regarding exposure of individuals to criteria pollutants in local communities. LSTs have been developed for nitrogen oxides (NO_x), CO, PM₁₀ and PM_{2.5}. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or State ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area, distance to the sensitive receptor, and project size. As explained in the PEIR, SCAQMD identifies sensitive receptors as residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes. LSTs only apply to emissions within a fixed stationary location; they are not applicable to mobile sources. The use of LSTs is voluntary, to be implemented at the discretion of local agencies (SCAQMD 2008a).

The SCAQMD LSTs are defined for 37 source receptor areas (SRAs). The project is located in source receptor area 17 (SRA-17), Central Orange County (SCAQMD 2008a). LSTs have been developed for emissions within construction areas up to five acres in size. The SCAQMD provides lookup tables for sites that measure up to one, two, or five acres. The proposed project is limited to pipeline and maintenance hole construction; the area under active construction at any given time would not be expected to exceed one acre per day. Pursuant to SCAQMD guidance, LSTs for the one-acre site should be used for sites that are less than one acre in size. LSTs for construction on one-acre sites in SRA-17 are shown in **Table 3-3**. LSTs are provided for a distance of 25 meters (82 feet) from the project, which is the most conservative LST distance (LSTs range from 25 to 500 meters). The proposed alignment along Breckenridge Street and Sacramento Street would be within a two-lane road in a residential neighborhood, therefore the more conservative LSTs for sensitive receptors within a distance of 25 meters are assumed to be applicable to the entire project.

Table 3-3: SCAQMD LSTs for Construction and Operation

Pollutant	Allowable emission from a one-acre site in SRA-17 for a receptor within 25 meters, or 82 feet (pounds/day)
Gradual Conversion of NO _x to NO ₂	81
CO	485
PM ₁₀ – operation	1
PM ₁₀ – construction	4
PM _{2.5} – operation	1
PM _{2.5} – construction	3

Source: SCAQMD 2009

a) Conflict with or obstruct implementation of the applicable air quality plan?

The SCAQMD's 2022 AQMP assesses the attainment status of the SCAB, which includes Orange County, and provides a strategy for attainment of State and federal air quality standards. The AQMP strategies are developed based on population, housing, and employment growth forecasts anticipated under local city general plans and the SCAG's 2020 Regional Transportation Plan/Sustainable Communities Strategy, referred to as Connect So Cal.

A project would conflict with or obstruct an applicable air quality plan if it would lead to population, housing or employment growth that exceeds the forecasts used in the development of the applicable air quality plan. The proposed project would construct approximately 11,000 linear feet of sewer pipelines and maintenance holes to maintain the condition of the wastewater conveyance system. The proposed project would improve operational benefits and flexibility to accommodate existing and planned demands for wastewater conveyance in OC San's service area that would occur with or without this project. Construction would not require personnel to relocate from outside the area; jobs will be filled by local workers. The proposed project would not lead to unplanned population, housing or employment growth that exceeds the forecasts used in the development of the AQMP. Potential conflicts with the AQMP would be less than significant.

Mitigation Measures

None required.

Significance Determination

Less than significant.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non- attainment under an applicable federal or state ambient air quality standard?

The proposed project would result in emissions of criteria pollutants from short-term construction activities. Construction emissions were estimated using the California Emissions Estimator Model (CalEEMod) 2022.1.1.13, which is used throughout California to quantify criteria pollutants and greenhouse gas emissions (GHGs).

The CalEEMod emissions scenarios were based on project-specific information, found in *Section 2 Project Description*. In instances where project-specific information was not available (e.g., construction equipment horsepower, length of worker trips, soil moisture content), the analysis relied on CalEEMod default values for construction activities. As explained in *Section 2.4 Proposed Project Description*, it is assumed that construction would begin in January 2024 and have a duration of 24 months. The model also assumes compliance with SCAQMD's Rule 403 (Fugitive Dust) which requires construction projects to implement measures to suppress fugitive dust emissions, such as watering of exposed soils, limiting vehicle speeds on unpaved areas, and covering haul trucks.

Construction Emissions

The criteria air pollutant emissions from construction of the proposed project were estimated using CalEEMod version 2022.1.1.13. The tables below present the maximum daily emissions for each of the modeled criteria air pollutants for which the SCAB has not attained national and/or State criteria. **Table 3-4** presents total mass daily emissions without implementation of PEIR **Mitigation Measure AQ-1** and shows that the project's construction emissions would not exceed regional thresholds.

Table 3-4: Proposed Project Maximum Daily Construction Emissions Compared to Regional Thresholds (pounds/day)

Emissions Source	NO _x	ROG	CO	PM _{2.5}	PM ₁₀
Total onsite and mobile sources	32	4	37	2	3
SCAQMD Regional Thresholds	100	75	550	55	150
Threshold exceeded?	No	No	No	No	No

Note: Emissions represent the maximum of winter or summer and are rounded to the nearest whole number.

Table 3-5 shows emissions with implementation of PEIR **Mitigation Measure AQ-1**. PEIR **Mitigation Measure AQ-1** would require that all 50-horsepower or greater diesel-powered equipment be powered with a California Air Resources Board-certified Tier 4 Final engine, except if such engines are not available and the emissions threshold can be met from other equipment. PEIR **Mitigation Measure AQ-1** reduces the cumulative emissions of criteria air pollutants, specifically NO_x emissions, associated with all projects in the FMP, of which the Taft Avenue Sewer Rehabilitation Project is a part. Although the project's individual emissions would not exceed regional thresholds, **Mitigation Measure AQ-1** would be required to reduce the cumulative air pollution impacts of the FMP, as identified in the PEIR. The PEIR required **Mitigation Measure AQ-1** be applied to each project under the FMP. In the case of the current Taft Branch Improvement project, it was assumed all equipment would be equipped with Tier 4 Final engines, except the drill rig engine (for potential microtunneling), which is not readily available. For the drill rig, the construction contractor would comply with **Mitigation Measure AQ-1** by seeking an exemption and demonstrating to OC San that the emissions from the proposed replacement equipment would not exceed SCAQMD mass daily thresholds, the applicable SCAQMD localized significance thresholds, or the

SCAQMD carcinogenic (cancer) risk threshold. With implementation of **Mitigation Measure AQ-1**, the project would not result in an exceedance of national or State ambient air quality standards and impacts would be less than significant.

Table 3-5: Mitigated Proposed Project Maximum Daily Construction Emissions Compared to Regional Thresholds (pounds/day)

Emissions Source	NO _x	ROG	CO	PM _{2.5}	PM ₁₀
Total onsite and mobile sources	16	2	49	1	2
SCAQMD Regional Thresholds	100	75	550	55	150
Threshold exceeded?	No	No	No	No	No

Note: Emissions represent the maximum of winter or summer and are rounded to the nearest whole number. Values are taken from the “mitigated” CalEEMod output tables to represent emissions with Mitigation Measure AQ-1 (Tier 4 Final engines).

Operations

The pipeline and maintenance holes would not be associated with long-term energy usage or additional OC San O&M activities. Inspection and maintenance of the pipeline and maintenance holes would be incorporated into OC San’s existing O&M activities and would not be expected to require additional vehicle trips. Thus, no new emissions would be associated with operation of the proposed project.

Mitigation Measures

The following mitigation measure shall be incorporated into the project to reduce mass daily NO_x emissions that would contribute to regional air quality impacts during construction. The following mitigation measure was identified in the FMP PEIR as Mitigation Measure AQ-1. The proposed project’s air quality impacts would be less than significant with mitigation incorporated.

Mitigation Measure AQ-1: Tier 4 Final Engines. Prior to the commencement of construction activities for each project, the Orange County Sanitation District (OC San) shall require its construction contractor to demonstrate that all 50-horsepower or greater diesel-powered equipment is powered with California Air Resources Board (CARB)-certified Tier 4 Final engines.

An exemption from this requirement may be granted if (1) the OC San documents equipment with Tier 4 Final engines are not reasonably available, and (2) the required corresponding reductions in criteria air pollutant emissions can be achieved for the project from other combinations of construction equipment. Before an exemption may be granted, the OC San’s construction contractor shall: (1) demonstrate that at least two construction fleet owners/operators in Orange County were contacted and that those owners/operators confirmed Tier 4 Final equipment could not be located within Orange County during the desired construction schedule; and (2) the proposed replacement equipment has been evaluated using California Emissions Estimator Model (CalEEMod) or other industry standard emission estimation method and documentation provided to the OC San to confirm that project-generated emissions do not exceed applicable SCAQMD mass daily thresholds, the applicable SCAQMD localized significance thresholds, or the SCAQMD carcinogenic (cancer) risk threshold.

Significance Determination

Less than significant with mitigation incorporated.

c) Expose sensitive receptors to substantial pollutant concentrations?

As explained previously in this section, SCAQMD identifies sensitive receptors as residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive receptors near the proposed project consist of single-family and multi-family residences on either side of the proposed alignment along Taft Avenue, Sacramento Street, Breckenridge Street, and Meats Avenue, as well as a school and day care facility that are located along Taft Avenue (Saint Norbert Catholic School and Children's House Preschool).

LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or State ambient air quality standard at the nearest sensitive receptor. The CAAQS and NAAQS provide public health protection, including protecting the health of "sensitive" populations such as asthmatics, children, and the elderly. If a project is consistent with the latest adopted clean air plan and does not exceed the SCAQMD significance thresholds, it can be assumed that it will not have a substantial adverse impact on public health. Therefore, projects that conform to the LSTs and SCAQMD regional thresholds are assumed to have a less than significant impact on nearby sensitive receptors.

The proposed project emissions were compared to LSTs for the project area. As noted above, LSTs are only applicable to emissions within a fixed, stationary location, such as construction sites, and vary based on project site size. **Table 3-3** provides LSTs that are applicable to the onsite construction activities, including pipeline trenching, installation of pipeline and maintenance holes, and roadway resurfacing. As explained under the discussion above, SCAQMD provides LST lookup tables for sites that measure up to one, two, or five acres; LSTs for construction sites smaller than one acre should use the one acre threshold. As shown in **Table 3-6**, with adherence to SCAQMD Rule 403 to control fugitive dust, the proposed project would not have a significant air pollution impact on sensitive receptors along the Sacramento Street and North Breckenridge Street alignment. As shown in **Table 3-7**, onsite emissions would not have a significant air pollution impact on sensitive receptors with incorporation of PEIR **Mitigation Measure AQ-1**, requiring Tier 4 final engines.

Table 3-6: Proposed Project Maximum Daily Construction Emissions Compared to Localized Significance Thresholds (pounds/day)

Emissions Source	NO_x	CO	PM₁₀	PM_{2.5}
Maximum onsite	30	34	2	1
<i>LST (one-acre, 25 meters LST)</i>	<i>81</i>	<i>485</i>	<i>4</i>	<i>3</i>
Threshold exceeded?	No	No	No	No

Note: Emissions represent the maximum of winter or summer and are rounded to the nearest whole number.

Table 3-7: Mitigated Proposed Project Maximum Daily Construction Emissions Compared to Localized Significance Thresholds (pounds/day)

Emissions Source	NO_x	CO	PM₁₀	PM_{2.5}
Maximum onsite	14	46	<1	<1
<i>LST (one-acre, 25 meters LST)</i>	<i>81</i>	<i>485</i>	<i>4</i>	<i>3</i>
Threshold exceeded?	No	No	No	No

Note: Emissions represent the maximum of winter or summer and are rounded to the nearest whole number. Values are taken from the “mitigated” CalEEMod output tables.

As discussed in the PEIR, and demonstrated above for the proposed project, no FMP collection system project would exceed the applicable LST during construction, given required compliance with SCAQMD Rule 403 for fugitive dust control. Additionally, as explained in the PEIR, the collection system projects would not be associated with impacts related to CO hotspots or emissions of TACs or hazardous air pollutants. Furthermore, the construction fleet contracted for the proposed project would be required to comply with the CARB In-Use Off-Road Diesel-Fueled Fleets Regulations, which would limit vehicle idling time to five minutes, restrict adding vehicles to construction fleets with older-tier engines, and establish a schedule for retiring older, more polluting engines from the construction fleet (CARB 2011). Although the cumulative levels of NO_x during construction would exceed the thresholds, which would elevate the health risks associated with exposure to NO₂ and NO_x, with implementation of **Mitigation Measure AQ-1**, construction emissions would be less than the SCAQMD mass daily thresholds and impacts would be less than significant. Additionally, the proposed project would not result in a net increase in operational emissions. The proposed project’s construction and operational emissions would not exceed SCAQMD regional thresholds or LSTs. Therefore, sensitive receptors would not be subjected to substantial pollutant concentrations and impacts would be less than significant with implementation of **Mitigation Measure AQ-1**.

Mitigation Measures

To reduce criteria air pollutants during construction, namely mass daily NO_x emissions and associated health risk impacts, OC San shall implement **Mitigation Measure-AQ-1**.

Significance Determination

Less than significant with mitigation incorporated.

d) Result in other emissions (such as those leading to odors or adversely affecting a substantial number of people)?

Examples of facilities commonly known to generate objectionable odors include wastewater treatment plants, sanitary landfills, composting/green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting/coating operations, rendering plants, and food packaging facilities (CARB 2005). The proposed project would involve emissions of sulfur compounds from use of oil and diesel fuel during construction, which would potentially result in unpleasant odors. Construction would be temporary and odorous emissions from construction equipment tend to dissipate quickly within short distances from construction sites.

Once the proposed project is operational, the underground sewer pipelines would not be associated with odors. Impacts would be less than significant.

Mitigation Measures

None required.

Significance Determination

Less than significant.

3.4 Biological Resources

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
Would the Project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	[]	[X]	[]	[]
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	[]	[]	[]	[X]
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	[]	[]	[]	[X]

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

The biological resources study area in the PEIR covered the majority of the proposed project area; however, two segments are located outside this study area: the segment of Taft Avenue east of Tustin Street, and Sacramento Street segment. Likewise, the proposed staging areas were not covered in the PEIR. As such, a Biological Review was prepared in June 2022 which focused on the current project area and two proposed staging areas. Literature and online database searches were completed to identify if any previously identified special-status flora, fauna, or habitats have the potential for occurrence in the project vicinity. Google Earth aerial photos were studied to understand the local and regional context of the immediate project vicinity that could potentially be impacted by proposed construction. The complete Biological Review is provided in **Appendix B** and is relied upon for the analysis in this IS/MND.

Regulated or sensitive resources evaluated included special status plant and wildlife species, migratory/nesting birds, wildlife movement corridors and habitat linkages, rare plant communities, and jurisdictional waters and wetlands. Potential impacts on biological resources were analyzed based on the following statutes:

- Federal Endangered Species Act
- Migratory Bird Treaty Act (MBTA)
- Clean Water Act
- Wetlands and Other Waters of the United States
- California Endangered Species Act
- California Fully Protected Species
- California Native Plant Protection Act
- California Environmental Quality Act (CEQA)
- California Fish and Game Code Section 1602

- California Wetland Definition
- Section 401 Clean Water Act
- Porter-Cologne Water Quality Control Act
- Orange County Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP)
- County of Orange General Plan
- City of Orange General Plan
- City of Orange Municipal Code

The Biological Review literature search was completed to ensure that current and accurate data were integrated into the determination of the proposed project's environmental and regulatory setting. Pertinent sources reviewed included, but were not limited to, the following:

- California Department of Fish and Wildlife Special Vascular Plants, Bryophytes, and Lichens List
- California Department of Fish and Wildlife Special Animals List
- California Natural Diversity Database
- California Native Plant Society Inventory of Rare and Endangered Plants
- U.S. Fish and Wildlife Service (USFWS) Critical Habitat Mapper and File Data
- eBird online database of bird distribution and abundance
- Google Earth aerial imagery

A formal jurisdictional delineation of waters and wetlands was not performed for the project because the project area would not be located within potentially jurisdictional features.

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

The proposed project would be constructed within existing City of Orange roadways. Potential staging areas would be located on vacant land and, if necessary, within roadway right-of-ways. All project components are located in fully developed and/or landscaped and maintained areas and both of the staging areas are manicured lawn and/or mowed-disturbed-ruderal land. As a result, sensitive species are not expected to occur within the project area due to the lack of suitable habitat as well as historical and existing disturbances. The literature search did not discover any current, special-status resources and none are expected to occur given the developed/disturbed conditions and lack of native plant communities.

The potential for nesting bird habitat is low, due to developed/disturbed conditions. Street trees are present but offer low quality nesting opportunities due to their sparse growth from frequent maintenance pruning and moderate to high traffic with associated noise and dust along adjacent streets. However, the Migratory Bird Treaty Act protects nearly all bird species native to the United States, including eggs and nests, making it illegal to directly kill, or destroy a nest of, nearly any native bird species. To reduce the potential for significant impacts to nesting birds, **Mitigation Measure BIO-1** will be implemented, which requires avoidance of nests during the nesting bird season (typically February 1 through August 31) or conducting

a preconstruction nesting bird survey if avoidance is not possible. Implementation of **Mitigation Measure BIO-1** would reduce potential impacts to nesting birds to a less than significant.

Construction of the proposed project would occur entirely within the roadway right-of-ways, and the high levels of existing disturbance within the potential staging areas would likely deter wildlife and nesting birds' long-term use. However, while indirect impacts to plants and wildlife would be minimal, construction activities planned during the bird nesting/breeding season could have a potentially significant impact on hatchlings or fledglings. **Mitigation Measure BIO-1** would be implemented to avoid impacts to nesting birds by avoiding the migratory bird nesting season or requiring a survey for nesting birds prior to construction and requiring active nests be avoided and monitored until construction activities cease. With implementation of **Mitigation Measure BIO-1**, impacts would be less than significant.

Mitigation Measures:

The following mitigation measure shall be incorporated into the project to reduce potential impacts to protected nesting birds. The following mitigation measure was identified in the FMP PEIR as Mitigation Measure BIO-1. The proposed project's biological resource impacts would be less than significant with mitigation incorporated.

BIO-1: Nesting Bird Avoidance.

Construction activities for project-level and program-level projects shall avoid the migratory bird nesting season (typically February 1 through August 31), to reduce any potential significant impact to birds that may be nesting within 500 feet of project sites. If construction activities must occur during the migratory bird nesting season, an avian nesting survey of the project site and suitable habitat within 500 feet of the site shall be conducted for protected migratory birds and active nests. The avian nesting survey shall be performed by a qualified biologist meeting the standards in the field within 72 hours prior to the start of construction in accordance with the Migratory Bird Treaty Act (16 USC 703–712) and California Fish and Game Code, Sections 3503, 3503.5, and 3513. If an active bird nest is found, the nest shall be flagged and an appropriate buffer established around the nest, which shall be determined by the biologist based on the species' sensitivity to disturbance (up to 300 feet for passerines and up to 500 feet for raptors and special-status species). The nest area shall be avoided until the nest is vacated and the juveniles have fledged. No project activities may encroach into the buffer until a qualified biologist has determined that the nestlings have fledged, and the nest is no longer active.

Significance Determination

Less than significant with mitigation incorporated.

b) Have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plan, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

The project area is located within fully developed roadways and both staging areas contain manicured/disturbed grassland which lack native and natural vegetation. The literature search did not discover any current, special-status resources and none are expected to occur given the developed/disturbed conditions and lack of native plant communities. Sensitive plant species typically have very specific habitat requirements which the project area does not support. There are no riparian, riverine,

or natural communities present in the right-of-ways or staging area sites. Therefore, the proposed project would have no impact on any riparian habitat or other sensitive natural community.

Mitigation Measures

None required.

Significance Determination

No impact.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The proposed project would not directly impact drainages or wetlands potentially under state or federal jurisdiction. The project alignment is within existing right-of-ways and staging areas would be located on parcels that do not encroach into a federally protected wetland or jurisdictional feature. Therefore, no impacts to jurisdictional drainages, wetland or riparian habitat would result from the project.

Surficial soils underlying the project area consist of predominantly moderately to well drained, permeable loams that have been heavily disturbed due to past uses and would not be able to support vernal pools or vernal pool species. No vernal pools or fairy shrimp habitat was observed during review of the Google Earth aerial photos. No impact would occur.

Mitigation Measures

None required.

Significance Determination

Less than significant.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The proposed project area would be contained entirely within roadway right-of-ways and manicured/disturbed grassland and would not result in the construction of any new buildings or structures that could impede wildlife movement. The increased human presence in these areas during construction would be temporary and would not discourage local wildlife use. Therefore, the project would have no impacts on wildlife movement.

Mitigation Measures

None required.

Significance Determination

No impact.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Chapter 12.28 of the City of Orange Municipal Code protects street trees by requiring a permit for removal. "Street trees" are defined by the City as all varieties of trees and shrubs located within all or any portion of a right-of-way including the parkway (City of Orange nd). In the event that street trees or other vegetation would need to be removed for project construction, implementation of **Mitigation Measure BIO-2** would require the project to obtain a permit prior to cutting, trimming, pruning, or removing any tree, shrub, or plant. Impacts would be less than significant with mitigation.

Mitigation Measures

The following mitigation measure shall be incorporated into the project to reduce potential impacts associated with removal or trimming of street trees. The following mitigation measure was identified in the FMP PEIR as Mitigation Measure BIO-5. The proposed project's biological resource impacts would be less than significant with mitigation incorporated.

BIO-2: Public and Parkway Trees.

If the final project design for project-level and program-level projects determines that public and parkway trees may be impacted during project construction for any project-level and program-level projects that occur within the City of Huntington Beach, the City of Fountain Valley, and any other city with a tree protection ordinance (e.g., City of Orange Municipal Code Chapter 12.28 Street Trees), a permit or permission from the applicable city must be obtained prior to cutting, trimming, pruning, or removing any tree, shrub or plant.

Significance Determination

Less than significant with mitigation incorporated.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The proposed project is located within the Matrix Area of the Orange County NCCP/HCP. No habitat and species conservation goals have been established for this area; therefore, the project would have no direct or indirect impacts to the Orange County NCCP/HCP. There would be no impact.

Mitigation Measures

None required.

Significance Determination

No impact.

3.5 Cultural Resources

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
Would the Project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	[]	[X]	[]	[]
b) Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?	[]	[X]	[]	[]
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	[]	[X]	[]	[]

Discussion

On November 20 and December 12, 2019, a cultural resources records search of the California Historical Resources Information System (CHRIS) at the South Central Coastal Information Center at the California State University, Fullerton was conducted for the FMP project area identified in the PEIR and a 0.25-mile buffer (OC San 2020). This FMP area includes the proposed project area, and is included as project 2-49 within the PEIR. The purpose of the records search was to identify any previously recorded cultural resources and cultural resources studies within a 0.25-mile buffer of most of the OC San service area. The CHRIS record search included a search of the National Register of Historic Places, California Register of Historical Resources, California State Historical Landmarks, California State Points of Historical Interest, and the California State Historic Resources Inventory. Within the entire FMP area, no resources qualify as a historical resource under CEQA guidelines. None of the identified resources are located within the proposed project area.

The PEIR evaluated pre-European contact and early European contact land use of the FMP area across Orange County and examined FMP facilities based on aerial photographs and satellite images. A pedestrian field survey of the FMP area was completed on January 13, 2020 to examine areas identified during the records search and aerial image examination that were thought to have a higher potential for encountering archaeological resources during FMP project activities. A sensitivity analysis included a list of projects in the FMP with nearby culturally sensitive areas which would require monitoring during FMP project activities. Project 2-49 corresponds to the proposed project within the PEIR, and was not identified as a project area with nearby cultural resources. The proposed project area is in a setting that is entirely built-out and construction of the proposed sewer improvement project would be conducted within the existing alignment in the roadway right of way. No historically or culturally sensitive areas were identified in the proposed project area in the FMP PEIR.

a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

Historical resources are not anticipated to be encountered based on the results of the records searches, aerial studies, and pedestrian survey conducted for the FMP area. Although no known historical resources would be affected by the proposed project, construction has the potential to encounter previously unknown historical resources. While encountering unknown historical resources is unlikely based on the proposed project area's previous ground disturbance and lack of previously recorded historical resources, a Worker Cultural Resources Sensitivity Training (**Mitigation Measure CUL-1**) will be conducted for the proposed project. Prior to construction, a qualified archaeologist will conduct cultural resources sensitivity training for all construction personnel to inform them of the types of archaeological resources that may be encountered, the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains, and safety precautions to be taken when working with archaeological monitors. In the event of the unanticipated discovery of cultural remains, **Mitigation Measure CUL-2** will be implemented, which involves immediately ceasing all ground disturbing activities while a qualified archaeologist assesses the resource.

The implementation of **Mitigation Measures CUL-1**, and **CUL-2**, by the proposed project would ensure the procedures are in place in the event of unanticipated discovery of previously unknown historical resources. Operation of the proposed project would not involve ground disturbing activities and would therefore have no impact on cultural resources. Implementation of **Mitigation Measures CUL-1** and **CUL-2** would reduce potential impacts to previously unknown historical resources, if encountered during construction, to less than significant.

Mitigation Measures:

The following mitigation measures shall be incorporated into the project to reduce potential impacts to unknown cultural resources that could be uncovered during trenching and excavation. The following mitigation measures were identified in the FMP PEIR as Mitigation Measure CUL-1 and CUL-3.¹ The

¹ FMP PEIR Mitigation Measure CUL-2 does not apply to the Taft Avenue Sewer Rehabilitation Project. Mitigation Measure CUL-2 in the PEIR required archaeological monitoring be conducted for ground-disturbing activities at Reclamation Plant No. 1, Treatment Plant No. 2, the Seal Beach Pump Station Replacement (3-67), and Los Alamitos Sub-Trunk Extension project (3-68) in Seal Beach; Newport Beach Pump Station Odor Control Improvements (5-68) only as they intersect with ground-disturbing activities at the 15th Street Pump Station Rehabilitation (X-022), Lido Pump Station Rehabilitation (X-023), Rocky Point Pump Station Rehabilitation(X-024), and A Street Pump Station Rehabilitation (X-041). FMP PEIR Mitigation Measure CUL-2 required archaeological monitoring be conducted for ground-disturbing activities associated with high cultural sensitivity portions of the Tustin-Orange Interceptor Sewer at Reach 17 Rehabilitation (X-065), Tustin-Orange Interceptor Sewer at Reach 18 Rehabilitation (X-066), Crystal Cove Pumping Station Upgrade and Rehabilitation (5-66), DAFT Demolition (X-043), Hoover-Western Sub-Trunks Sewer Rehabilitation (X-067/X-085), Edinger/Springdale Trunk Sewer Rehabilitation (X-071), Substation and Warehouse Replacement at Plant 2 (P2-126), Operations and Maintenance Complex at Plant 2 (P2-138).

proposed project's potential cultural resources impacts would be less than significant with mitigation incorporated.

CUL-1: Worker Cultural Resources Sensitivity Training. Prior to start of ground-disturbing activities, the qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (or an archaeologist working under the direct supervision of the qualified archaeologist) shall be retained by the Orange County Sanitation District (OC San) and shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel shall be informed of the types of archaeological resources that may be encountered, the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains, and safety precautions to be taken when working with archaeological monitors. The OC San contractor shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance. See also **TCR-1** in Section 3.18.

CUL-2: Treatment of Archaeological Materials. In the event of the unanticipated discovery of archaeological materials during ground-disturbing activities associated with the proposed project, the Orange County Sanitation District (OC San) shall immediately cease all work activities in the area (within 100 feet) of the discovery until it can be evaluated by the qualified archaeologist. Construction shall not resume until the qualified archaeologist has conferred with OC San on the significance of the resource. In the event that preservation in place is determined to be infeasible and data recovery through excavation is the only feasible mitigation available, an Archaeological Resources Treatment Plan, in accordance with the Advisory Council on Historic Preservation's 2009 Section 106 Archaeology Guidance, shall be prepared and implemented by the qualified archaeologist in consultation with OC San. The Archaeological Resources Treatment Plan will provide for the adequate recovery of the scientifically consequential information contained in the archaeological resource. OC San shall consult with appropriate Native American representatives in determining treatment for pre-contact or Native American resources. The treatment options after data recovery efforts occur may include returning the resource to the appropriate tribe or donation of the resource to a repository identified by the tribe. If preservation in place is not an option or re-deposition on site is not an option, the resource will be curated at an archaeological curation facility (compliant with standards established in 36 CFR 79, Sections 9, 10, and 11). See also **TCR-2** and **TCR-3** in Section 3.18.

Significance Determination

Less than significant with mitigation incorporated.

b) Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?

Although there are no surface indicators of archaeological resources within the proposed project area, it is possible that unknown buried or obscured archaeological resources may exist. Although the project area is considered to have low archaeological sensitivity, in the event construction exposes previously unrecorded archaeological resources, implementation of **Mitigation Measures CUL-1** and **CUL-2** would minimize impacts by conducting Worker Cultural Resources Sensitivity Training (**Mitigation Measure CUL-1**) and halting all ground disturbing activities in the event of an unanticipated discovery of archaeological materials (**Mitigation Measure CUL-2**). Operation of the proposed project would not involve ground disturbing activities and would therefore have no impact on unique archaeological resources. With implementation of

Mitigation Measures CUL-1 and CUL-2, potential impacts from construction resulting in an adverse change to unique archeological resources would be less than significant.

Mitigation Measure

See CUL-1 and CUL-2

Significance Determination

Less than significant with mitigation incorporated.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Although the proposed project area is considered to have low archaeological sensitivity given the level of previous ground disturbance, there is always a possibility of discovering human remains during ground disturbing activities. Worker Cultural Sensitivity Training conducted in **Mitigation Measure CUL-1** includes the proper procedures to be implemented in the event of an inadvertent discovery of human remains. In the event of a discovery, all ground disturbing activities would halt (**Mitigation Measure CUL-2**). In addition, OC San's General Requirement GR-6-Z: Discovery of Human Remains requires that the County Coroner be notified immediately upon the accidental discovery or recognition of any human remains and construction activities be halted. If the remains are found to be Native American, the Native American Heritage Commission would be notified within 24 hours and guidelines from the Native American Heritage Commission would be followed in the treatment and disposition of the remains. OC San's General Requirement GR-6-Z: Discovery of Human Remains states, "In the event of accidental discovery or recognition of any human remains, the County Coroner would be notified immediately and construction activities shall be halted. If the remains are found to be Native American, the Native American Heritage Commission would be notified within 24 hours. Guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains."

There would be no ground disturbing activities during operation of the proposed project and therefore no mitigation related to discovery of human remains would be required during operation. With implementation of **Mitigation Measures CUL-1, CUL-2** and General Requirement GR-6-Z during construction, impacts as a result of the inadvertent discovery of human remains would be less than significant.

Mitigation Measure

See CUL-1 and CUL-2.

Significance Determination

Less than significant with mitigation incorporated.

3.6 Energy

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
Would the Project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	[]	[]	[X]	[]
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	[]	[]	[X]	[]

Discussion

Electrical service for the proposed project area is provided by SCE. According to SCE's power content label for 2021, its electricity comes from approximately 31.4 percent renewables, 2.3 percent large hydroelectric, 22.3 percent natural gas, 9.2 percent nuclear, and 34.8 percent from other and unspecified power sources through transactions (SCE 2022). Natural gas service for the proposed project area is provided by the Southern California Gas Company.

Various state policies encourage GHG emissions reductions, which are interrelated with renewable energy and energy efficiency. GHGs are discussed in greater detail in *Section 3.8 Greenhouse Gas Emissions*. Assembly Bill (AB) 32 and Senate Bill (SB) 32 set statewide targets for GHG reductions, and the 2008 CARB *Scoping Plan* and 2017 *Scoping Plan Update* contain strategies for achieving emission reductions, such as reducing energy demand from mobile sources and land use development. Energy use associated with construction of individual projects is not a focus of these statewide plans.

Neither the County of Orange nor City of Orange maintain a climate action plan or other document governing energy efficiency. The City of Orange General Plan contains goals and policies to encourage energy efficiency (City of Orange 2010); however, these goals and policies are primarily related to building energy efficiency and public transportation and would not apply to the proposed project.

OC San prepared a Climate Resiliency Study in 2019 (OC San 2019) to evaluate climate risks to its facilities, focusing on treatment facilities and pump stations. The study does not specifically address pipelines but contains GHG emission reduction measures which would apply to energy use associated with the project, such as improvements to fleet vehicles (e.g., addition of electric vehicles).

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Construction of the proposed project would involve construction-related fossil fuel consumption from operation of diesel-powered construction equipment, and fossil fuel consumption from material hauling, delivery, and worker vehicle trips. The anticipated construction fleet for the proposed project includes typical construction equipment such as a backhoe/loader, excavator, crane, utility truck, water truck, dump trucks, concrete saw, sweeper, paver, and generator. The construction vehicle fleet is summarized in **Table 2-2** in *Section 2.4 Proposed Project Description*. The PEIR estimated the petroleum demand generated during construction of the collection systems. For project 2-49 Taft Branch Sewer Improvements, the fuel demand estimated in the PEIR is presented in **Table 3-8**. The proposed project as described in this IS/MND has only changed slightly in comparison to the alignment presented in the PEIR but would require a similar construction fleet as anticipated in the PEIR (see *Table 2-2 Construction Vehicle Fleet for Pipelines*). The proposed project would involve 1,000 linear feet more pipeline compared to project 2-49 in the PEIR and the proposed project pipeline would be constructed at an average rate of 50 linear feet per day. Thus, the proposed project would require 20 more days of construction equipment usage compared to the PEIR project 2-49. Given the total construction duration of 24 months, the proposed project would not consume substantially more construction-related energy than that analyzed in the PEIR (i.e., the proposed project would involve up to 20 more days of construction vehicle use than PEIR project 2-49, which is about 4.2% of the total number of construction days).

Table 3-8: Construction Petroleum Demand

Construction equipment	Petroleum Demand (gallons)
Off-road equipment (diesel)	22,775
Haul trucks (diesel)	942
Vendor trucks (diesel)	969
Worker vehicles (gasoline)	1,609

Operation of the proposed project would not involve a change in the consumption of energy. Routine inspection of the pipeline and maintenance holes would be incorporated into OC San's existing O&M activities and would not cause a net change in vehicle trips or associated fossil fuel consumption.

The proposed project would implement typical construction practices such as trenching and repaving. The project would not require unusual or excessive construction equipment or practices that would result in wasteful, inefficient, or unnecessary consumption of energy compared to projects of similar type and size. In addition, the construction fleet contracted for the proposed project would be required to comply with the CARB In-Use Off-Road Diesel-Fueled Fleets Regulations, which would limit vehicle idling time to five minutes, restrict adding vehicles to construction fleets with older-tier engines, and establish a schedule for retiring older, less fuel-efficient engines from the construction fleet (CARB 2011). Once construction is complete, the proposed project would not involve operational energy consumption. Therefore, construction and operation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy and impacts would be less than significant.

Mitigation Measures

None required.

Significance Determination

Less than significant.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

As described in the PEIR, the project would not interfere with state or local plans related to renewable energy or energy efficiency. The proposed project would not result in a net increase beyond existing levels in energy use or vehicle trips during operation. The project would not involve land use changes that would indirectly result in an increase in vehicle trips or vehicle miles travelled. As explained under "a" above, the project would not involve wasteful or inefficient energy consumption during construction. Operation of the project would not involve consumption of water or an unplanned increase in the generation of solid waste.

Because the project would not result in a net increase in operational vehicle trips and would not change land use patterns, it would not conflict with statewide plans related to energy use. The City of Orange General Plan contains goals and policies to encourage energy efficiency; however, these apply to project operation, and the proposed project would not increase operational energy use. OC San's 2019 Climate Resiliency Study contains GHG emissions reduction measures which are interrelated with energy use. These focus primarily on wastewater treatment processes and building efficiency. One GHG reduction measure is concerned with improvements to fleet vehicles (e.g., gas efficiency, fuel type, electric cars, bicycles, etc.); the OC San fleet would be used for O&M activities for the proposed project and thus these GHG reduction improvements would be incorporated into O&M, consistent with the Climate Resiliency Study. Therefore, the project would not conflict with local plans (City of Orange or OC San) for energy efficiency or renewable energy. The proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Impacts would be less than significant, and no mitigation would be required.

Mitigation Measures

None required.

Significance Determination

Less than significant

3.7 Geology and Soils

	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
<i>Potentially Significant Impact</i>			

Would the Project:

- a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of top soil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

The project is located within the southerly portion of the Los Angeles Basin, which is situated near the northern end of the Peninsular Ranges Geomorphic Province. The Los Angeles Basin has been divided into four structural blocks, which are generally bounded by prominent fault systems: The Northwestern Block, the Southwestern Block, the Central Block, and the Northeastern Block. The project is located within the Central Block, which is bordered on the west by the Newport-Inglewood fault, on the east by the Whittier-Elsinore fault, on the north by the Malibu Coast-Santa Monica-Raymond fault, and on the south by the San Joaquin Hills. The Central Block is characterized by thick sequences of alluvium overlying predominantly sedimentary rock of Cretaceous through Pleistocene age (Ninyo & Moore 2022).

The project area is underlain by Quaternary-aged (Holocene and Pleistocene) old and young alluvial-fan deposits (USGS 2006). The western end of the proposed alignment is located approximately 5,000 feet east of the Santa Ana River Channel. Regional geologic mapping indicates that the western portion of the alignment is underlain by late to middle Pleistocene age old alluvial fan deposits generally consisting of reddish-brown gravel and sand. The eastern portion of the alignment is underlain by Holocene and latest Pleistocene age young alluvial fan deposits consisting of gravel, sand, and silt (Ninyo & Moore 2022).

Surficial soils underlying the project area consist predominantly of Sorrento clay loam and Myford sandy loam, which are composed of moderately to well drained, permeable loams that occur on gently sloping alluvial fans (UC Davis nd). In addition, because the project alignment is within existing developed City of Orange right-of-ways, artificial fill is expected to be present throughout the area.

Active faults are faults that have ruptured within the Holocene time, or within approximately the last 11,000 years. Potentially active faults are those that show evidence of movement during Quaternary time (approximately the last 1.6 million years) but for which evidence of Holocene movement has not been established (Ninyo & Moore 2022). The Peralta Hills Structure is the only major fault within one mile of the project area and is classified as possibly active by the Southern California Earthquake Data Center (City of Orange 2010). Displacements along these two faults are smaller than those along the more prominent regional faults such as the Elsinore Fault Zone, San Jacinto Fault Zone, and San Andres Fault Zone which lie approximately 6, 35, and 40 miles east of the project area, respectively, and the Newport-Inglewood Fault which lies approximately 10 miles southwest of the project area (USGS nd). Portions of land near the project area along the Santa Ana River and Santiago Creek are susceptible to subsidence. No land near the project area is susceptible to landslides (CGS 2022a).

a.i) Directly or indirectly caused potential substantial adverse effects, including the risk of loss, injury, or death involving: Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 41.

The potential for ground rupture is most likely to occur along the traces of active faults. Although the proposed project area is within a seismically active region of southern California, the project area is not within a State of California Earthquake Fault Zone (also known as Alquist-Priolo Special Studies Zone Fault Zone). Based on literature review and site reconnaissance, no active faults are known to cross the alignment. Therefore, the probability of damage from surface fault rupture is considered to be low. In addition, the design and construction of the project pipeline would be based on the geotechnical data report prepared for the project by Ninyo & Moore (2022) to minimize geological risk. Design recommendations provided in

the geotechnical report include performing earthwork in accordance with the standard specifications for public works construction; stabilizing temporary trenching and shoring; performing excavations in accordance with OSHA regulations; retaining a qualified and experienced engineer to design the shoring system; over-excavation of unstable soils and replacement with gravel wrapped in geo-fabric for trench bottom stability; use of at least six inches of granular pipe bedding material; use of trench backfill material that is free of oversize debris and has an optimum moisture content; and careful trench backfill placement and compaction that is in accordance with appropriate governing agency standards and good construction practice. Therefore, due to the distance of Alquist Priolo faults and potential earthquake magnitudes of local faults, impacts related to ground rupture would be less than significant.

a.ii) Directly or indirectly caused potential substantial adverse effects, including the risk of loss, injury, or death involving: Strong seismic ground shaking?

The project area is located within a seismically active region of southern California near local and regional faults capable of generating earthquakes with strong ground shaking. The intensity of ground shaking would depend upon the magnitude of the earthquake, distance to the epicenter, and the geology of the area between the epicenter and the project area.

Considering the proximity of the project area to active faults capable of producing a maximum moment magnitude of 6.0 or more, the project has a high potential for experiencing strong ground motion during the design life of the proposed improvements (Ninyo & Moore 2022). Although impacts related to strong seismic ground shaking would potentially be significant in the project area, the proposed project would not include any land use components that would induce growth or otherwise bring additional people to the area or structures people would occupy that would be at risk of loss, injury of death from strong seismic ground shaking.

The project would be designed and constructed pursuant to applicable American Water Works Association (AWWA) standards and would incorporate measures to accommodate seismic loading pursuant to guidelines such as the "Greenbook" Standard Specifications for Public Works Construction (Greenbook Committee of Public Works Standards, Inc. 2018) and the International Building Code (IBC; International Code Council 2018). These guidelines are produced through joint efforts by industry groups to provide standard specifications for engineering and construction activities, including measures to accommodate seismic loading parameters. These standards and guidelines are widely accepted by regulatory authorities and are regularly included in related standards such as municipal building and grading codes. In addition, the project design would follow guidelines within the California Building Code (CBC; California Code of Regulations, Title 24, Part 2), which is based on the IBC with amendments to reflect conditions specific to California. The project would also be designed per OC San General Requirement (GR-16) which requires the installation of all equipment and appurtenances to comply with the requirements of the applicable edition of the California Building Code (California Code of Regulations, Title 24, Part 2). OC San General Requirement GR-16 Seismic Design and Construction states, "The installation of all equipment and appurtenances shall comply with the requirements of the applicable edition of the California Building Code (California Code of Regulations, Title 24, Part 2). Supports and connections shall be designed to prevent sliding or overturning, in accordance with the Code and these Specifications. Brackets and anchors shall be of ductile materials so that they can absorb energy and continue to carry load. Any changes to the design affecting structural components shall be documented on drawings stamped and signed by a Structural Engineer registered in the State of California and shall be submitted for Engineer's acceptance."

The pipeline would be designed in conformance with OC San and state seismic engineering standards as well as recommendations of the geotechnical report prepared for the project which would minimize geological risk. Therefore, the proposed project would not directly or indirectly result in substantial adverse effects, including the risk of loss, injury, or death due to seismic ground shaking. Impacts would be less than significant.

a.iii) Directly or indirectly caused potential substantial adverse effects, including the risk of loss, injury, or death involving: Seismic-related ground failure, including liquefaction?

Liquefaction is the process by which clay-free soil, such as sands and silts, temporarily lose cohesion and strength and turn into a fluid state during a severe ground shaking event. This primarily occurs in areas saturated with high groundwater levels and recent deposits of sands and silts. Based on review of the Seismic Hazard Map for the Orange Quadrangle, the project area is not located in a liquefaction hazard zone (Ninyo & Moore 2022). In addition, the project would be designed and constructed in accordance with state and OC San seismic engineering standards described under “a.ii” above, and the geotechnical report prepared for the project (Ninyo & Moore 2022) which would reduce any potential impacts associated with liquefaction. The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure including liquefaction. Impacts would be less than significant.

a.iv) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Landslides?

Seismically induced landslides and slope failures are common occurrences during or soon after large earthquakes. Landslides can occur when strong ground movement such as an earthquake shakes loose soil and causes land and debris to lose stability and slide. The project area is not located in a landslide susceptibility zone (CGS 2022a). Due to the proximity of the proposed project to the nearby foothills, the potential for seismically induced landslides affecting the proposed transmission pipeline is very low. In addition, the project would be designed and constructed in accordance with state and OC San seismic engineering standards described under “a.ii” above. The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. There would be no impact.

Mitigation Measures

None required.

Significance Determination

No impact.

b) Result in substantial soil erosion or the loss of top soil?

The proposed project could result in minor erosion of soils or loss of topsoil onsite during project construction, in particular due to the presence of soil stockpiles during excavation activities. Exposed soil piles are susceptible to erosion during strong winds, heavy rains, or other storm events. Project construction would disturb more than one acre of land and would require a National Pollutant Discharge Elimination System (NPDES) Construction General Permit. A Stormwater Pollution Prevention Plan (SWPPP) would be prepared and implemented in compliance with the Construction General Permit. Best management

practices (BMPs) would be identified in the SWPPP to control and reduce pollutant discharges associated with construction activities and erosion of soil. Potential BMPs include, but are not limited to, erosion control blankets, silt fences, and fiber rolls (Caltrans 2003). These BMPs would reduce erosion, and potential impacts associated with erosion of exposed soil would be less than significant. With implementation of the standard construction BMPs, the potential for soil erosion during proposed project construction would be considered less than significant. All pipeline disturbance areas would be restored to pre-project conditions after construction is complete and would not result in further soil erosion. Therefore, impacts would be less than significant.

Mitigation Measures

None required.

Significance Determination

Less than significant.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

The proposed project area is underlain by Holocene and Pleistocene old and young alluvial-fan deposits, generally consisting of gravel, sand, and silt. Based on the California Department of Water Resources (DWR) Interferometric Synthetic Aperture Radar (InSAR) data, the project area is not at risk for subsidence (DWR 2022). Similar to the seismically induced landslide impacts addressed in response “a.iv” above and the liquefaction impacts addressed in response “a.iii” above, the project area’s potential to have unstable soils that could result in landslides, liquefaction (or lateral spreading which is induced by liquefaction), or subsidence, was determined to be a less than significant impact due to the relatively flat topography of the project area and the project’s location within existing right-of-ways. Adherence to the state and OC San seismic engineering standards would ensure structural resiliency to earthquake events and any other causes of lateral spreading or liquefaction. In addition, the design and construction of the project pipeline would be based on the geotechnical data report prepared for the project to minimize geological risk (Ninyo & Moore 2022). Fill materials used to backfill would be stable with little risk of subsidence or collapse. Therefore, implementation of the project is not expected to result in significant risk of landslide, lateral spreading, liquefaction, subsidence, or collapse. Impacts would be less than significant.

Mitigation Measures

None required.

Significance Determination

Less than significant

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Expansive soils have the ability to significantly change their volume, shrink and swell, due to their soil moisture content. Expansive soils can crack rigid structures and potentially create pipeline rupture. Typically, expansive soils are very fine grained with a high to very high percentage (60 percent or more) of clay.

Surficial soils underlying the project area consist predominantly of Sorrento clay loam and Myford sandy loam which are composed of 30 percent and 40 percent clay composition, respectively (UC Davis nd). Based on the clay particle content of the soil, the project area would not be located on expansive soils. The proposed project would be designed and constructed to the standards described in response “a.ii” as well as the geotechnical data report prepared for the project to minimize geological risk (Ninyo & Moore 2022). Fill materials used to backfill would be stable with little risk of damage to the infrastructure from expansion. Therefore, impacts would be less than significant.

Mitigation Measures

None required.

Significance Determination

Less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

The project does not propose the construction or use of septic tanks or alternative wastewater disposal systems. Therefore, there would be no impact.

Mitigation Measures

None required.

Significance Determination

No impact.

f) Directly or indirectly destroy a unique paleontological resource of site or unique geologic feature?

The California Public Resources Code (Section 5097.5) prevents an individual from removing, destroying, or altering any paleontological resources found on public lands without the permission of the public agency that has jurisdiction over the lands. The Orange County General Plan (2010) contains Objective 2.2 that requires the taking of all reasonable and proper steps to achieve the preservation of archaeological and paleontological remains, or their recovery and analysis to preserve cultural, scientific, and educational values.

No paleontological resources are documented within the project area (OC San 2020). However, paleontological resources sensitivity areas are mapped according to previous fossil discoveries within the OC San service area. The paleontological resources sensitivity map (**Figure 3-2**) is based on published geological mapping and paleontological sensitivity categories set forth in the County of Orange Archaeological/Paleontological Curation: Final Guidelines, Procedures, and Policies (OC San 2020). Sedimentary deposits mapped as moderate to high paleontological resources sensitivity may be impacted at an unknown depth below native topsoil, artificial fill, or younger Quaternary alluvium; therefore, ground-disturbing pipeline replacement activities within these areas may encounter important and unique paleontological resources. The proposed project area is located in an area of moderate paleontological sensitivity. Thus, ground-disturbing activities could result in a potentially significant paleontological resource impact. Implementation of **Mitigation Measure GEO-1** would require development of a

paleontological monitoring plan and preconstruction training prior to ground disturbing activities. With the implementation of **Mitigation Measure GEO-1**, impacts to unique paleontological resources or geologic features would be less than significant.

Mitigation Measures

The following mitigation measure shall be incorporated into the project to reduce potential impacts associated with encountering paleontological resources during excavation. The following mitigation measure was identified in the FMP PEIR as Mitigation Measure GEO-1. The proposed project's impacts on paleontological resources would be less than significant with mitigation incorporated.

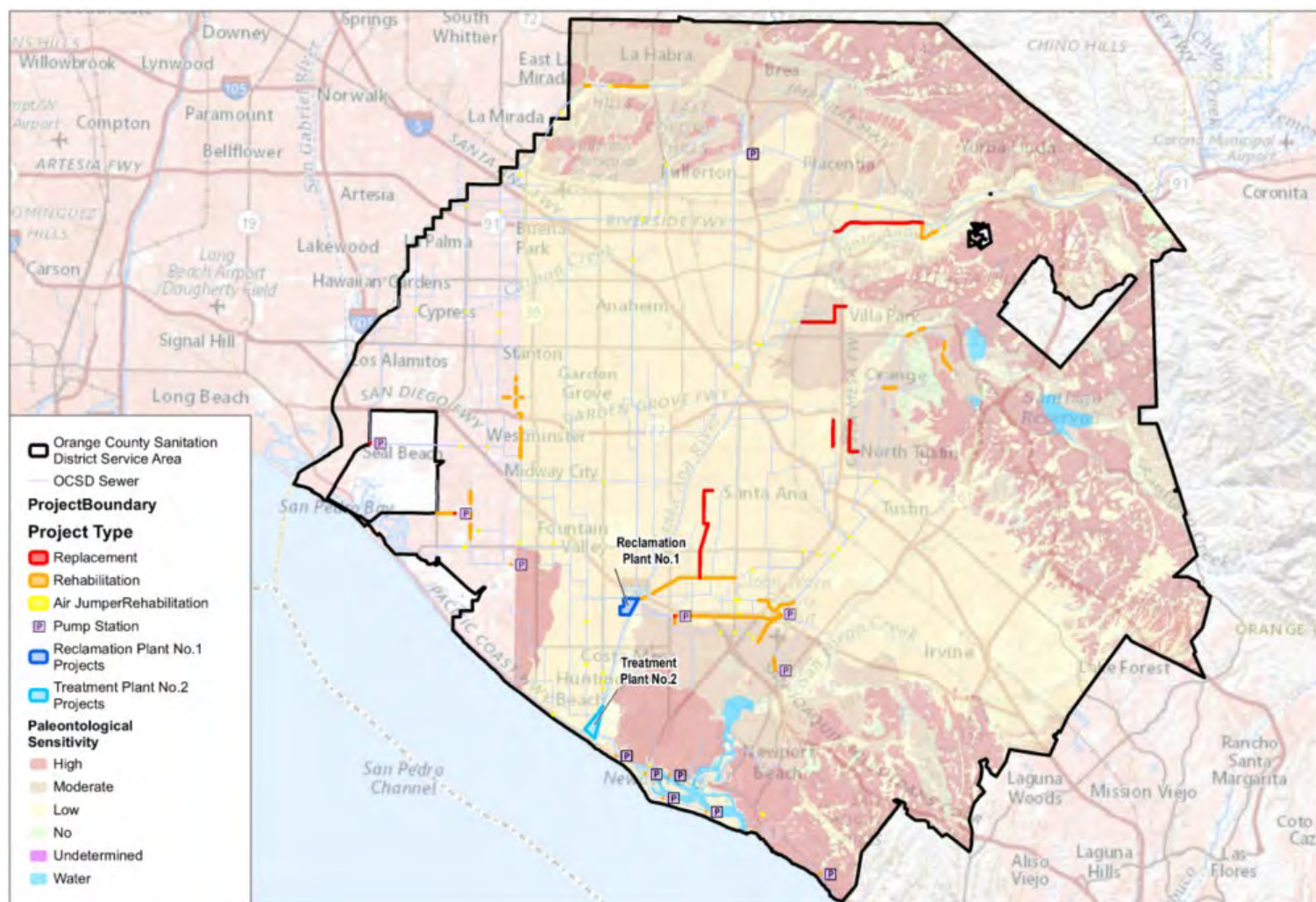
Mitigation Measure GEO-1: Paleontological Resources

Prior to commencement of any construction phase ground-disturbing activity in areas of moderate to high paleontological sensitivity (the Taft Branch Improvement Project is identified as an area of "moderate" paleontological sensitivity, see PEIR Figure 4.6-1), the Orange County Sanitation District shall retain a qualified paleontologist per the 2010 Society of Vertebrate Paleontology guidelines. The paleontologist shall prepare a paleontological resources impact mitigation program for the project that reduces all impacts to less than significant. The paleontological resources impact mitigation program shall be consistent with the Society of Vertebrate Paleontology guidelines and shall include: requirements for preconstruction meeting attendance and worker environmental awareness training, where monitoring is required within the project area based on construction plans and/or geotechnical reports; procedures for adequate paleontological monitoring and discoveries treatment; and paleontological methods (including sediment sampling for microvertebrate fossils), reporting, and collections management. The qualified paleontologist shall attend the preconstruction meeting, and a paleontological monitor under the direction of the qualified paleontologist shall be on site during initial ground-disturbing activities in areas of previously undisturbed moderate and/or high paleontological resources sensitivity. In the event that paleontological resources (e.g., fossils) are unearthed, the paleontological monitor shall temporarily halt and/or divert ground-disturbing activity to allow recovery of paleontological resources. The area of discovery shall be roped off with a 50-foot-radius buffer. Once documentation and collection of the find is completed, the paleontological monitor shall allow ground-disturbing activities to recommence in the area of the find.

Significance Determination:

Less than significant with mitigation incorporated.

Figure 3-2: OC San Facilities Master Plan PEIR - Paleontological Sensitivity



3.8 Greenhouse Gas Emissions

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
Would the Project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	[]	[]	[X]	[]
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	[]	[]	[X]	[]

Discussion

GHGs are pollutants that are known to increase the greenhouse effect in the earth's atmosphere thereby adding to global climate change impacts. Several pollutants have been identified as GHGs, and the California definition of a GHG in the Health and Safety Code, Section 38505(g) includes carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Water vapor is also a GHG; however, it is short lived, and concentrations are largely determined by natural processes such as evaporation. Other GHGs such as fluorinated gases are created and emitted through anthropogenic sources. The most common anthropogenic GHGs are CO₂, CH₄, and N₂O.

A measurement called Global Warming Potential (GWP) is used to measure how much energy the emissions of one ton of a gas will absorb over a given period of time, relative to the emissions of one ton of CO₂. CO₂e is the amount of GHG emitted multiplied by its GWP. CO₂ has a 100-year GWP of one; CH₄ has a GWP of 25; and N₂O has a GWP of 298.

In 2005, Executive Order (EO) S-3-05, signed by Governor Arnold Schwarzenegger, set GHG emission reduction targets:

- 2010 should have 2000 levels;
- 2020 should have 1990 levels; and
- GHG emissions should be 80 percent below 1990 levels by 2050.

SB 32, passed in 2016, required that in the next update to the AB 32 Scoping Plan, CARB should "ensure that statewide GHG emissions are reduced to at least 40 percent below the statewide GHG emissions limit no later than December 31, 2030." In 2018, EO B-55, signed by Governor Jerry Brown, set a GHG emission reduction target for California to be carbon neutral by 2045.

CARB adopted the *Scoping Plan* in December 2008 and a *Scoping Plan Update* in December 2017. The *Scoping Plan* contains the strategies California will implement to achieve a GHG emissions reduction of 40

percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. In the *Scoping Plan*, "CARB recommends that lead agencies prioritize onsite design features that reduce emissions, especially from vehicle miles travelled (VMT), and direct investments in GHG reductions within the project region that contribute potential air quality, health, and economic co-benefits locally."

OC San's service area, and the proposed project, lie within the jurisdiction of the SCAQMD. On December 5, 2008, the SCAQMD Board approved interim CEQA GHG significance thresholds for stationary sources, rules, and plans using a tiered approach for determining significance. Tier 3, the primary tier the SCAQMD board uses for determining significance, set a screening significance threshold of 10,000 MTCO₂e/year for determining whether an industrial project would have a less than significant cumulative GHG impact, and a screening significance threshold of 3,000 MTCO₂e/year for a non-industrial project (SCAQMD 2008b). This threshold is meant to apply to industrial projects where SCAQMD is the lead agency (Radlein, personal correspondence 2020). The proposed project also lies within the boundaries of Orange County and the City of Orange; however, neither of these jurisdictions have prepared a climate action plan with local CEQA significance thresholds. The City of Orange uses SCAQMD thresholds to determine significance of GHG impacts (City of Orange 2020b).

OC San prepared a Climate Resiliency Study in 2019 to evaluate climate risks to its facilities, focusing on treatment facilities and pump stations. The study also contains GHG emission reduction measures, which include water recycling to avoid emissions from imported water, energy recovery from treatment facilities, efficient lighting designs, improvements to building plumbing and ventilation, installation of electric vehicle charging stations, and improvements to fleet vehicles such as addition of electric vehicles (OC San 2019).

SCAG's 2020 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) (SCAG 2020), referred to as Connect SoCal, is a regional growth-management strategy that targets per capita GHG reduction from passenger vehicles and light-duty trucks in the Southern California region pursuant to SB 375. In addition to demonstrating the region's ability to attain and exceed the GHG emission-reduction targets set forth by CARB, the 2020 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with four core goal categories: economy, mobility, environment, and healthy/complete communities. The guiding principles of the plan include: placing high priority for transportation funding in the region on projects and programs that improve mobility, accessibility, reliability and safety, and that preserve the existing transportation system; encouraging RTP/SCS investments and strategies that collectively result in reduced non-recurrent congestion and demand for single occupancy vehicle use, by leveraging new transportation technologies and expanding travel choices; and encouraging transportation investments that will result in improved air quality and public health, and reduced greenhouse gas emissions. The Successful implementation of the 2020 RTP/SCS would result in increased mobility options and a more sustainable growth pattern.

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The project would create GHG emissions during construction only. Construction is expected to last approximately 24 months, and the project's life expectancy is conservatively assumed to be 30 years for the

purposes of this GHG analysis.² Construction impacts would include vehicle and equipment emissions associated with pipeline trenching and installation, maintenance hole construction, and road resurfacing. The project would not generate a net increase in operation emissions because the pipeline would not require energy use to operate, and inspection of the pipeline and maintenance holes would be incorporated into OC San's existing O&M trips. Further details can be found in *Section 2 Project Description*.

Modeling of air emissions from construction was completed in CalEEMod version 2022.1.1.13 for construction of the project. Details on construction, including timing and equipment, can be found in *Section 2.4 Proposed Project Description*. The project would not emit GHGs associated with electricity consumption; all GHG emissions would result from vehicle use, including construction equipment, haul trips, and worker trips. No energy would be required for the operation of the pipeline. Other project details necessary for GHG emissions modeling were obtained from CalEEMod and the design engineer estimates (e.g., equipment horsepower, load factors, fleet mix, and vehicle emissions factors).

The results of the inventory for GHG emissions, as shown in the CalEEMod output tables in **Appendix A**, are presented in **Table 3-9** along with the SCAQMD Tier 3 significance threshold. Consistent with the methodologies in the SCAQMD GHG significance thresholds, total GHG emissions from construction have been amortized over a 30-year lifetime of the project.

Table 3-9: Proposed Project GHG Emissions per Year (MTCO₂e/year)

Source	MTCO ₂ e
Operation	negligible
Construction (amortized over 30 years)	58
Total	58
Threshold	3,000
<i>Exceed Threshold?</i>	<i>No</i>

Based on the results of CalEEMod, construction of the proposed project would emit a total of 1,719 MTCO₂e. Amortized over a 30-year period, the project would generate approximately 58 MTCO₂e per year. In addition to the low per year generation of MTCO₂e, the project would adhere to existing energy efficiency requirements during construction, including CARB's In-Use Off-Road Diesel-Fueled Fleets Regulations that limit vehicle idling time to five minutes and establish a schedule for retiring older and less fuel-efficient engines (CARB 2011). Construction related GHG impacts would be less than significant.

The State of California has set targets for renewable energy from the energy sector through the Renewable Portfolio Standard. The Renewable Portfolio Standard directs energy utilities to source half of their electricity sales from renewable sources by 2030 (CEC 2017). The proposed project would not consume electricity.

² As explained in the PEIR, the SCAQMD Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold (SCAQMD 2008b) recommends construction emissions be amortized over a 30-year project lifetime. The operational life of the project is generally anticipated to be greater than 30 years; however, OC San continues to upgrade, rehabilitate, and replace facilities prior to reaching full anticipated operational life to ensure provision of reliable service to the OC San service area. Therefore, the 30-year operational life assumption is appropriate and conservative.

Therefore, the proposed project would not conflict with or obstruct this target, and impacts would be less than significant.

Mitigation Measures

None required.

Significance Determination

Less than significant

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

California's 2017 *Scoping Plan Update* focuses on reducing energy demand and GHG emissions that result from mobile sources and land use development. The proposed project would not involve a considerable increase in new vehicle trips or land use changes that would result in an increase in vehicle trips, such as urban sprawl. The project is designed to meet existing and anticipated demand that would occur with or without the project. As described in the PEIR, the project would not conflict with any *Scoping Plan* emission reduction strategies or climate change policies or measures, such as the low carbon fuel standard, vehicle efficiency measures, and heavy-duty vehicle GHG emissions reductions.

Because the project would not result in a net increase in operational vehicle trips, the project would not conflict with the 2020 RTP/SCS strategies related to reducing vehicle trips and VMT or use of alternative fuel vehicles. Construction vehicle trips would be temporary, and operation of the project would not result in a net increase in energy use or VMT. Therefore, the project would not conflict with the 2020 RTP/SCS strategies and policies.

O&M visits would be conducted using OC San's fleet vehicles. O&M activities would be conducted using OC San's vehicle fleet, which is continually being improved with regard to efficiency and fuel type, consistent with the Climate Resiliency Study. Therefore, the project would not conflict with OC San plans for reduction of GHG emissions.

The project would not result in GHG emissions higher than the SCAQMD significance screening thresholds. The proposed project would not, therefore, conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Impacts would be less than significant, and no mitigation would be required.

Mitigation Measures

None required.

Significance Determination

Less than significant.

3.9 Hazards and Hazardous Materials

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
Would the Project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	[]	[X]	[]	[]
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	[]	[X]	[]	[]
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	[]	[X]	[]	[]
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	[]	[X]	[]	[]
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?	[]	[]	[]	[X]
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	[]	[X]	[]	[]

-
- | | | | | |
|---|-----|-----|-----|-------|
| g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? | [] | [] | [] | [X] |
|---|-----|-----|-----|-------|

Discussion

Hazardous materials are currently used throughout the project area for agricultural, residential, transportation, construction, and other similar land uses. Through natural events, system failures, and accidents (spills), hazardous materials can become a risk to the environment and human health. Numerous local, state and federal laws exist to regulate the storage, use, handling and transportation of hazardous materials. To increase public safety and awareness of hazardous materials exposure risk, businesses and entities that handle, store, transport, or use hazardous materials are required to file reports with appropriate authorities and maintain emergency response plans in the event of a hazardous materials release (OC San 2020).

A regulatory records search was performed for the project area using the SWRCB GeoTracker database (SWRCB 2022) and the California Department of Toxic Substances Control (DTSC) EnviroStor database (DTSC 2022), both accessed 5/22/2022. These lists are a compilation of information from various sources listing potential and confirmed hazardous waste and hazardous substances sites in California.

There are no active hazardous materials cleanup sites listed on the SWRCB's GeoTracker database and the DTSC's EnviroStor database within or adjacent to the proposed project area. However, there are four open cleanup program sites and one open leaking underground storage tank (LUST) within one mile of the project area. The four open cleanup program sites are located at 1315 North Tustin Avenue (Express Cleaners); 1465 North Batavia Street (Orange Education Center); 1808 North Batavia Street (Dolomite/Resolution Trust Corp), and 2060 North Batavia Street (Great Western Carpet). The Express Cleaners, Dolomite/Resolution Trust Corp, Orange Education Center, Great Western Carpet are located 0.41, 0.45, 0.54, and 0.58 miles from the proposed project area, respectively. The single open LUST site is located at 2098 North Tustin Street (Mobil #08-KBK), 0.37 miles from the proposed project area. There are 17 closed cleanup program sites and 29 closed LUST sites within one mile of the project area.

There are two active and seven inactive or closed hazardous sites listed on the EnviroStor database within one mile of the proposed project area. The two active sites identified in the EnviroStor database are Shaffer Plaza (301-349 East Grove Avenue & 1997 North Orange Olive Road) and Thermal-Vac Technology, Inc. (1221 West Struck Avenue), which are located 0.39 and 0.94 miles, respectively, from the project area.

Subsurface exploration and laboratory testing was conducted as part of the Geotechnical Report development (Ninyo & Moore 2022). Between April 7th and 19th, 2022 eighteen small diameter exploratory borings along the project alignment were drilled, logged, and sampled. Soil samples were screened for VOCs. Elevated readings were measured near the surface in soils from two borings collected near the intersection of Taft Avenue and Tustin Street. Additionally, petroleum hydrocarbons were reported in the samples collected from three of the borings. However, concentrations of VOCs and petroleum hydrocarbons did not exceed regulatory screening levels. Detected metals were within background concentrations found in southern California soils and did not exceed regulatory screening levels (Ninyo & Moore 2022).

The California Department of Forestry and Fire Protection's (Cal Fire) Fire Resources Assessment Program (FRAP) assesses the amount and extent of California's forests and rangelands, analyzes their conditions, and

identifies alternative management and policy guidelines. Through the FRAP, CalFire produces maps designating very high fire hazard severity zones (VHFHSZ) within State and Local Responsibility Areas (SRAs). The project area is located within the City of Orange Local Responsibility Area (LRA) and adjacent to the City of Villa Park LRA. The City of Orange and City of Villa Park LRA maps designate the project area as a non-VHFHSZ (Cal Fire 2011a and 2011b).

There are no private, public, or military airports within 2 miles of the proposed project area. The project area is not within an airport land use plan.

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Typical hazardous materials that may be used during construction and routine O&M activities include gasoline, diesel fuel, oil, solvents, and lubricants. The use of these materials for their intended purpose would not pose a significant risk to the public or environment. Wastes, both hazardous and non-hazardous, accumulated during construction activities would be handled, documented, and disposed of in accordance with federal, state, and local laws and regulations.

Hazardous materials would be stored in designated construction staging areas (see *Section 2.4.6 Equipment Staging Areas*) and would be used, transported, handled, and stored in accordance with all applicable federal, state, and local laws and regulations (Federal Code Title 40 and 49; Occupational Safety and Health Administration (OSHA) 29 CFR 1910; California code section 5001, 5401, 5701, and 25507; California Health and Safety Code Division 20, Chapter 6.5, Article 6.5, Article 6.6) which are intended to minimize health risk to the public associated with hazardous materials. In addition, the project would require implementation of a Stormwater Pollution Prevention Plan (SWPPP) to address the discharge of construction related pollutants in storm water runoff (including construction-related hazardous materials) through implementation of appropriate BMPs. Specific BMPs would be determined during preparation of the SWPPP based on site- and project-specific characteristics (equipment types, etc.), and would be in conformance with the NPDES Construction General Permit. Conformance with federal hazardous materials transportation law (49 U.S.C. 5101 et seq.) and California Health and Safety Code Division 20, Chapter 6.5, Article 6.5 would require precautionary measures be taken during the routine transport of hazardous materials, such as testing and preparation of a transportation safety plan. According to California Health and Safety Code Division 20, Chapter 6.5, Article 13, used oil that may be produced from construction or operation of the project would be recycled.

Because the project requires excavation and restoration of road surfaces, any yellow traffic striping present would be tested for lead and chrome content and asphalt would be tested for asbestos prior to excavation or removal activities. **Mitigation Measure HAZ-1** will be implemented to identify and abate yellow traffic striping that may contain lead chromate and asphalt that may contain asbestos. Therefore, hazards to the public or the environment through routine transport, use, or disposal of hazardous materials would be less than significant with mitigation incorporated.

Mitigation Measures

The following mitigation measure shall be incorporated into the project to reduce potential impacts associated with hazardous materials exposure and release during construction. The following mitigation measure was identified in the FMP PEIR as Mitigation Measure HAZ-1. The proposed project's impacts related to the use of hazardous materials would be less than significant with mitigation incorporated.

Mitigation Measure HAZ-1: Pre-Demolition Hazardous Material Survey and Abatement

A survey will be conducted on collection system projects to identify yellow traffic striping that may contain lead chromate and asphalt that may contain asbestos. Following results of the hazardous materials survey, and incorporating information from current lead and asbestos inventories, demolition or renovation plans and contract specifications, including those for road-disturbing activities, shall incorporate abatement procedures for the removal of materials containing asbestos, lead, and universal waste items, as required by law. All abatement work shall be done in accordance with federal, state, and local regulations, including those of the U.S. Environmental Protection Agency, Occupational Safety and Health Administration, California Occupational Safety and Health Administration, and the South Coast Air Quality Management District.

Significance Determination

Less than significant with mitigation incorporated.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

The proposed project has the potential to expose the public and the environment to hazards associated with on-site releases of hazardous materials including gasoline, diesel fuel, oil, solvents, and lubricants during construction. As stated in *Section 2.3.2 Sensitive Receptors*, there are sensitive receptors within the project area which increase the risk of impact from an accidental release of hazardous materials. Hazardous materials would be used, transported, handled, and stored in accordance with all applicable federal, state, and local laws and regulations as discussed in a) above.

Because the project requires excavation and restoration of road surface, any yellow traffic striping present would be tested for lead and chrome content prior to excavation or removal activities. As discussed in a) above, any identified lead and asbestos materials would be abated prior to demolition in accordance with **Mitigation Measure HAZ-1**.

Multiple hazardous material pipelines (e.g., oil and gas) are located within the OC San service area boundary. Multiple Southern California Gas Company gas pipelines transect the proposed pipeline. An OC San 8-inch high pressure gas line runs parallel to the proposed pipeline along Taft Avenue (Woodard & Curran 2022). This proximity of utility assets is a routine occurrence, and OC San's standard project planning process as part of engineering design will include identifying existing underground or overhead utilities occurring in the vicinity of the proposed project.

The project area was not identified in the GeoTracker and EnviroStor databases as a site associated with soil contamination, LUSTs or any past or ongoing site cleanup activities. However, there is a potential for encountering unidentified contamination during ground disturbing activities. Therefore, OC San will implement **Mitigation Measure HAZ-2** that requires development of a Hazards Contingency Plan prior to ground disturbing activities. The Hazards Contingency Plan would outline procedures for training, safety, and identification of contaminated media (soil, soil vapor, groundwater) during construction activities; therefore, risks associated with previously unidentified contamination would be mitigated.

The cleanup activities that have occurred at contamination sites within one mile of the proposed project may include monitoring wells. These monitoring wells may be actively monitored as part of cleanup activities associated with the nearby cleanup site and not identified in the GeoTracker or Envirostor

databases. Disturbance of these monitoring wells during construction activities could cause a release of hazardous materials to the environment. Monitoring wells are protected under California Water Code (Division 7, Chapter 10, Article 4) and cannot be damaged or removed without proper permission from the overseeing regulatory agency. Any monitoring wells encountered during construction will be managed as described in **Mitigation Measure HAZ-3**, which requires consultation with the agency overseeing a cleanup site to determine if the proposed project may affect a monitoring well and determine a plan of action to protect the well.

Upon completion of construction, no chemicals would be stored onsite or routinely transported and used for project maintenance, other than oil and gasoline associated with use of operations and maintenance vehicles. OC San vehicles would be regularly maintained in good working order, in accordance with standard district practices. Because no other hazardous materials would be handled or emitted on a regular basis, operation of the project would result in very low to no risk of accidental release of hazardous materials. With the implementation of **Mitigation Measures HAZ-1** through **HAZ-3**, the impacts from hazardous materials to the public or the environment from potential accidents during construction would be reduced to less than significant. Also, it is noted that because the project would collectively improve older infrastructure, the risk of incidental rupture or release of sewage to the environment would be reduced compared to existing conditions.

Mitigation Measures

The following mitigation measures shall be incorporated into the project to reduce impacts associated with potential accidental hazardous materials release during construction. The following mitigation measures were identified in the FMP PEIR as Mitigation Measures HAZ-1, HAZ-4, and HAZ-5. The proposed project's impacts related to the accidental upset of hazardous materials would be less than significant with mitigation incorporated.

See **Mitigation Measure HAZ-1: Pre-Demolition Hazardous Materials Survey and Abatement**

Mitigation Measure HAZ-2: Hazards Contingency Plan.

Prior to commencement of any ground-disturbing activities where it has been determined that hazardous materials are present and will be disturbed (see **Mitigation Measure HAZ-14**), a Hazards Contingency Plan shall be developed that addresses potential impacts to soil, soil vapor, and groundwater from releases on or near the project sites. The Hazards Contingency Plan shall include training procedures for identification of contamination. The Hazards Contingency Plan shall describe procedures for assessment, characterization, management, and disposal of hazardous constituents, materials, and wastes, in accordance with all applicable state and local regulations. Contaminated soils and/or groundwater shall be managed and disposed of in accordance with local and state regulations. The Hazards Contingency Plan shall include health and safety measures, which may include but are not limited to periodic work breathing zone monitoring and monitoring for volatile organic compounds using a handheld organic vapor analyzer in the event impacted soils are encountered during excavation activities. As opposed to a single document, all necessary elements of a Hazards Contingency Plan may be developed into contract specifications.

Mitigation Measure HAZ-3: Monitoring Well Protection.

Monitoring wells associated with nearby cleanup sites may be located within the proposed project boundaries. Some of these wells may still be actively monitored as part of required cleanup activities. The agency overseeing the associated cleanup site (Regional Water Quality Control Board, Department

of Toxic Substances Control, or Orange County Health Care Agency) will be consulted prior to project activities that could affect the monitoring wells to determine the best plan of action to either decommission and destroy, protect, and/or replace affected monitoring wells.

Significance Determination

Less than significant with mitigation incorporated.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Taft Elementary School (1080 North California Street), Saint Norbert Catholic School (300 E Taft Avenue), and Children's House Preschool (1400 E Taft Avenue) area located within one-quarter mile of the proposed project area. There is a low risk of accidental release of hazardous materials and toxic air pollutants during project construction. As explained under responses "a" and "b" above, construction of the proposed project would be compliant with local regulations and implementation of **Mitigation Measures HAZ-1** and **HAZ-2**, would reduce the risk of hazardous emissions to the environment associated with demolition and excavation of any unidentified soil contamination. In addition, the proposed project's estimated maximum daily construction emissions of particulate matter and other air pollutants would be below the SCAQMD regional threshold and one-acre LST threshold with mitigation as explained in *Section 3.3 Air Quality*. Therefore, impacts on schools within one-quarter mile of the proposed project would be less than significant with implementation of **Mitigation Measures HAZ-1** and **HAZ-2**.

Mitigation Measures

See **Mitigation Measure HAZ-1 Pre-Demolition Hazardous Materials Survey and Abatement** and **HAZ-2 Hazards Contingency Plan**.

Significance Determination

Less than significant with mitigation incorporated.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Regulatory records were searched through the SWRCB GeoTracker database (SWRCB 2022) and the DTSC EnviroStor database (DTSC 2021). None of the proposed project area falls within a site that is included on a list of recent or currently active clean-up or hazardous materials sites per Government Code Section 65962.5 (SWRCB 2022; DTSC 2022).

Implementation of the Hazards Contingency Plan, as described in **Mitigation Measure HAZ-2**, would be used to mitigate hazards associated with newly identified contaminated sites. With implementation of Mitigation Measure **HAZ-2**, these hazards would be reduced to less than significant.

Mitigation Measures

See **Mitigation Measures HAZ-2 Hazards Contingency Plan**.

Significance Determination

Less than significant with mitigation incorporated.

e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project Area?

There are no private, public, or military airports within 2 miles of the proposed project area. In addition, the project area is not within an airport land use plan and would not include tall structures that could interfere with airport safety measures. There would be no impacts.

Mitigation Measures

None required.

Significance Determination

No impact.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The City of Orange has an emergency plan that establishes emergency preparedness and emergency response procedures for both peacetime and wartime disasters. The plan is termed an "Emergency Operations Plan" (EOP) and provides guidance for the City's response in case of emergencies within Orange or originating from areas outside the municipal boundary, including foreign and domestic terrorist acts. The plan was prepared in accordance with the State Office of Emergency Services guidelines for multi-hazard functional planning and contains annexes which address specific functions and duties of response agencies and a directory of emergency response resources. The City's plan addresses specific agency response for any type of disaster (City of Orange 2010).

The 2020 County of Orange and Orange County Fire Authority Local Hazard Mitigation Plan (LHMP) was developed collaboratively to increase public awareness, document resources for risk reduction and loss prevention, and identify activities to guide the County toward building a safer, more sustainable and more resilient community. The mission of the LHMP is to promote sound public policy designed to protect residents, critical facilities, infrastructure, key resources, private property, and the environment from natural hazards in unincorporated areas, fire hazards in the Fire Authority service area, and County and Fire Authority owned facilities (Orange County 2021).

The proposed project would construct approximately 11,000 linear feet of pipeline within existing City of Orange right-of-ways that would temporarily require partial road closures such that construction activities may conflict with the adopted emergency response plan and emergency evacuation plan (the City EOP and County LHMP). **Mitigation Measure TRA-1** would ensure that any temporary impacts to emergency vehicle flow and/or ingress/egress to properties along the project alignment are coordinated in advance with emergency service providers and law enforcement to ensure that provision of sufficient emergency service, access, and evacuation can occur during construction if necessary. O&M required during long-term operation of the project would be incorporated into OC San's existing operation and maintenance routine and would not be expected to affect emergency response. Implementation of **Mitigation Measure TRA-1**

would reduce impacts to local emergency service providers and potential interference with an adopted emergency response plan or emergency evacuation plan during project construction. Impacts would be less than significant.

Mitigation Measures

See **Mitigation Measure TRA-1.**

Significance Determination

Less than significant with mitigation incorporated.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Cal Fire has identified wildfire risk areas through the Fire Hazard Severity Zone maps. The City of Orange and City of Villa Park LRA maps designate the project area and vicinity as a non-VHFHSZ (Cal Fire 2011). The project alignment is entirely within existing roadway right-of-ways; the project area does not contain and is not adjacent to wildlands. The project area has a low risk of wildfire and the project would involve the installation and maintenance of an underground pipeline, which is not infrastructure typically associated with fire risk (see *Section 3.20 Wildfire*). Therefore, there would be no impacts associated with the exposure of people or structures either directly or indirectly to a significant risk of loss, injury or death involving wildlife fire.

Mitigation Measures

None required.

Significance Determination

No impact.

3.10 Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	[]	[]	[X]	[]

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

Surface Water

The proposed project is located in the Walnut Canyon-Santa Ana River subwatershed (HUC 180702031002) within the larger Santa Ana River Watershed. The Santa Ana River Watershed drains from the slopes of the San Bernardino Mountains to the valley floor of the Inland Empire, through the Prado Basin, on to Orange County and then the Pacific Ocean. The primary waterway in the Santa Ana River Watershed is the Santa

Ana River. The project area is located within the Lower Santa Ana River Hydraulic Area, which extends from Prado Dam to the Pacific Coast (OC San 2020).

The Santa Ana Regional Water Quality Control Board (RWQCB), Region 8, regulates water quality within the Santa Ana Region, including the upper and lower Santa Ana River watersheds. The RWQCB prepares and maintains the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan). The Basin Plan sets water quality standards in the Santa Ana River Basin by establishing beneficial uses for specific water bodies and designating numerical and narrative water quality objectives. The project area is located between the Santa Ana River Reach 2 and the Santiago Creek Reach 1, and upstream of the Santa Ana River Reach 1. The Santa Ana River Reach 2 carries all the upstream flows down through Santa Ana Canyon to Orange County where as much of the water as possible is recharged into the Orange County groundwater basin. The downstream end of the recharge area, which is the ordinary limit of surface flows, is at 17th Street in Santa Ana. The Santa Ana River Reach 1 extends from 17th Street to the Pacific Ocean. Beneficial uses of the Santiago Creek Reach 1 and Santa Ana River Reaches 1 and 2 are shown in **Table 3-10**.

Table 3-10: Beneficial Uses

Beneficial Use	Santiago Creek Reach 1	Santa Ana River Reach 1	Santa Ana River Reach 2
Agricultural Supply		Existing	
Groundwater Recharge	Existing	Existing	
Municipal and Domestic Supply	Existing	Except	Except
Rare/Threatened/Endangered Species		Existing	
Contact Recreation	Existing	Existing	Existing
Non-Contact Recreation	Existing	Existing	Existing
Warm Freshwater Habitat	Existing	Existing	Intermittent
Wildlife Habitat	Existing	Existing	Intermittent

Source: SAWPA 2022

The SWRCB also maintains the 303(d) List of Impaired Water Bodies, which identifies water bodies where water quality indicators exceed acceptable thresholds. The Santa Ana RWQCB develops and implements total maximum daily loads (TMDLs) to address water quality impairments and help achieve water quality standards. Water quality is also governed through NPDES stormwater discharge permits issued to municipalities, construction sites, and industrial facilities to control non-point-source pollutants in stormwater discharges to surface waters. The proposed project area does not directly drain to a 303(d)-listed impaired water body.

The U.S. Department of Homeland Security Federal Emergency Management Agency (FEMA) identifies flood hazard areas on Flood Insurance Rate Maps prepared for the National Flood Insurance Program. These areas, known as Special Flood Hazard Areas, are defined as areas where there is a one percent chance of flooding in any given year (also referred to as a 100-year flood). FEMA maps also identify moderate flood hazard areas, which are areas outside the one-percent flood area where there is a 0.2 percent chance of flooding in a given year (also referred to as a 500-year flood). Areas outside the 100-year and 500-year flood zones are considered areas of minimal flood hazard. Although the Santa Ana River and Santiago Creek are considered 100-year flood zones, these water bodies are outside of the project area. There are no 100-year or 500-year flood zones in the project area (FEMA 2009).

Groundwater

The proposed project overlies the Coastal Plain of Orange County Groundwater Basin (Orange County Basin, DWR Basin Number 8-001). This basin underlies central and northern Orange County and is bordered by the Santa Ana Mountains to the east, the Pacific Ocean to the west, the Newport–Inglewood Fault to the southwest, and Coyote Hills to the north. The Orange County Groundwater Basin reaches depths of more than 2,000 feet and is composed of a complex series of interconnected sand and gravel deposits (OC San 2020). The proposed project specifically overlies the Orange County Groundwater Management Zone within the Lower Santa Ana River Basin (Santa Ana RWQCB 2017).

The Orange County Basin is designated as a medium priority groundwater basin by DWR (DWR nd) under the Sustainable Groundwater Management Act (SGMA). Under SGMA, groundwater basins ranked as medium- or high-priority are required to develop groundwater sustainability plans (GSPs) or submit an alternative to a GSP that demonstrates how water managers have already achieved or will achieve sustainable groundwater management. In July, 2019, the DWR approved the Basin 8-1 Alternative prepared by Orange County Water District, City of La Habra and Irvine Ranch Water District satisfy SGMA requirements for groundwater sustainability of the Coastal Plain of the Orange County Basin, and included required elements of GSPs as described in the California Water Code (§10727.2, 10727.4, and 10727.6). The Basin 8-1 Alternative is updated every five years per SGMA requirements (OCWD nd).

The Santa Ana RWQCB designates beneficial uses for the Lower Santa Ana River Basin, including the Orange County Groundwater Management Zone. Beneficial uses for the Orange County Groundwater Management Zone include municipal, agricultural, industrial service, and industrial process supply (Santa Ana RWQCB 2017).

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction activities that primarily result in sediment releases are related to exposing previously stabilized soils to potential mobilization by rainfall/runoff and wind. Such activities have the potential to degrade surface or groundwater quality and include grading, excavations, and temporary stockpiling of soil. Erosion and sedimentation affect water quality and interfere with photosynthesis, oxygen exchange, and the respiration, growth, and reproduction of aquatic species. Additionally, other pollutants, such as nutrients, trace metals, and hydrocarbons, can attach to sediment and be transported to downstream drainages, which could contribute to the degradation of water quality. Furthermore, during grading and soil storage, there is the potential for soil migration off site via wind (OC San 2020).

The proposed project would disturb more than one acre of land and would require a NPDES Construction General Permit. As required by the permit, the construction contractor would prepare a SWPPP and implement BMPs during construction to control water quality from stormwater discharges offsite, such as site management “housekeeping,” erosion control, sediment control, tracking control and wind erosion control. Potential BMPs include, but are not limited to, erosion control blankets, silt fences, and fiber rolls to prevent potential impacts to surface or groundwater quality (Caltrans 2003). The contractor would be required to comply with the Construction General Permit throughout construction. If groundwater is encountered during excavation, dewatering discharges would be disposed of in accordance with applicable state and local requirements. Compliance with permits including implementation of BMPs, would ensure the project would not violate water quality standards or waste discharge requirements, nor significantly

degrade surface water and groundwater quality. Construction impacts on surface water and groundwater quality would be less than significant.

During construction, sewage releases would be controlled via a combination of bypass pumping (redundant pumps), spill containment for bypass pumps, and working at night for portions of work (see *Section 2.6 Environmental Commitments*). With incorporation of these standard construction measures, construction impacts relating to potential sewage releases and water quality would be less than significant.

Operation of the proposed project would consist of distributing wastewater through the proposed pipeline to OC San's sanitary sewer system. The existing sewer transmission pipelines are under capacity and implementation of the proposed project would lessen the potential for sewerage releases to occur. No adverse impacts on surface water and groundwater quality would occur from operation of the project.

Mitigation Measures

None required.

Significance Determination

Less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?

The proposed project is a sewer improvement project in an urbanized area and the project area is located within fully paved roadway rights of way. After installation of the new sewer pipeline, the project alignment would be restored to existing conditions, and would not result in a change in impervious surface area affecting the ability of rainfall to recharge the groundwater basin.

As discussed in *Section 3.14 Population and Housing*, the proposed project would serve existing wastewater demand and planned future growth that would occur with or without the project. The project would not induce population growth or increase water demands that would require additional groundwater pumping. Operation of the project does not require potable or non-potable water, meaning the use of water would be limited to temporary construction activities such as dust control. Therefore, the proposed project would not be expected to substantially decrease groundwater supplies or interfere with groundwater recharge efforts. There would be no impact.

Mitigation Measures

None required.

Significance Determination

No impact.

c.i) Substantially alter the existing drainage pattern of the site area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: result in substantial erosion or siltation on- or off-site?

The proposed project does not require the crossing of a river or stream. The proposed project would be constructed entirely within existing paved roadway rights of way which would be restored to pre-construction conditions, and thus would not permanently increase total impervious surface area.

Project construction may result in disturbance or exposure of soil that could be subject to erosion and sedimentation during a rain event. However, implementation of SWPPP and BMPs as required by the NPDES Construction General Permit would limit erosion and sedimentation.

As a result, the proposed project would not alter the existing drainage pattern of the project area in a manner which would result in substantial erosion or siltation on- or off-site. Therefore, the proposed project would have a less than significant impact.

c.ii) Substantially alter the existing drainage pattern of the site area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

There are no 100-year or 500-year flood zones in the project area (FEMA 2009). Construction of the project includes installation of underground sewer pipelines in paved roadways, and surface conditions would be restored to pre-project conditions. Thus, the rate or amount of surface runoff would not increase. As a result, the proposed project would not alter the existing drainage pattern of the site area in a manner which would result in flooding on- or off-site. Therefore, the proposed project would have no impact.

c.iii) Substantially alter the existing drainage pattern of the site area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

As discussed in *c.i*, and *c.ii*, above, the proposed project would not increase surface runoff or alter the existing drainage pattern of the site area in a manner which would create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. In addition, all construction activities would be conducted in accordance with BMPs specified in the construction SWPPP to reduce impacts to pollutants in storm water discharges. Also, because the project would collectively improve older infrastructure, the risk of incidental release of sewage would be reduced compared to existing conditions. Therefore, the proposed project would have a less than significant impact.

c.iv) Substantially alter the existing drainage pattern of the site area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: impede or redirect flood flows?

As discussed in *c.i*, *c.ii* and *c.iii*, above proposed project would not increase impervious surfaces or pass above, below, or through an existing stream or river. In addition, there are no 100-year or 500-year flood zones in the project area (FEMA 2009). As a result, the proposed project would not alter the existing drainage pattern of the site area in a manner which impede or redirect flood flows and would have no impact.

Mitigation Measures

None required.

Significance Determination

Less than significant.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?

A tsunami is a large ocean wave, caused by earthquakes or major ground movement. The proposed project site is located approximately 15 miles from the Pacific Ocean; at this distance, a tsunami would not impact the project area. A seiche is a large wave generated in an enclosed body of water such as a lake, which is also typically caused by an earthquake. There are no identified seiche zones in the Orange County Local Hazard Mitigation Plan or the Orange County General Plan Safety Element. There are no 100-year or 500-year floodplains within the project area (FEMA 2009). In addition, the project pipeline would be installed below existing roadways which would be resurfaced after construction, so there would be no risk of floods inundating the project and potential for release of pollutants is low. Therefore, there would be no impact.

Mitigation Measures

None required.

Significance Determination

No impact.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

As noted previously, the Basin Plan sets water quality objectives for the project area. Water quality thresholds identified in the Basin Plan are intended to reduce pollutant discharge and ensure that water bodies are of sufficient quality to meet their designated beneficial uses. The proposed project would not conflict with the water quality standards outlined in the Basin Plan or worsen water quality conditions in any 303(d)-listed water body. As discussed above, pollutant discharge during construction would be avoided via compliance with the Construction General Permit and SWPPP and NPDES permits for construction dewatering, if needed. Once operational, the project would convey wastewater through OC San's existing sanitary sewer system. The project would not discharge extracted or treated water or be a source of pollutants for downstream water bodies (e.g., Santa Ana River, Santiago Creek). Therefore, the proposed project would not conflict with the Basin Plan.

As previously discussed, the Orange County Basin is being managed for groundwater sustainability under the Basin-8 Alternative to a GSP, approved by DWR in 2017. The purpose of the project is to install sewer transmission lines to improve OC San's operational efficiency and capacity. The project does not involve the extraction of groundwater nor would it result in any increases in impervious surfaces that could affect groundwater recharge, and thus the project would not impact groundwater sustainability. Therefore, the project would not conflict with applicable water quality control plans or groundwater management plans. Impacts would be less than significant.

Mitigation Measures

None required.

Significance Determination

Less than significant.

3.11 Land Use and Planning

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
Would the Project:				
a) Physically divide an established community?	[]	[]	[]	[X]
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect	[]	[]	[X]	[]

Discussion

The proposed project is located in the City of Orange. Land use in the City of Orange is established in the City of Orange General Plan Land Use Element, which describes the desired future physical and economic composition of the City's planning area and the planned relationship of uses. The primary objectives of the Element are to determine the future location, type, and intensity of new development and redevelopment projects, and to establish the desired mix and relationship between such projects to maximize the long-term livability of the community (City of Orange 2015). According to the City of Orange Zoning Map, parcels adjacent to the proposed project are classified as single family residential, multi-family residential, commercial, and industrial (City of Orange 2022). As stated in *Section 2.3.7 Existing Site Conditions*, land uses in the project area are a combination of commercial businesses, churches, private schools, single family residential and multi-family residential.

The project pipeline would be constructed within existing City of Orange roadways. The proposed temporary staging areas along Taft Avenue (**Figure 2-2**) would be located on vacant land that is designated light industrial and single family residential. If the identified staging area options cannot accommodate all equipment storage/staging for the proposed project, the construction contractor may use roadway right-of-ways for the purposes of equipment storage, staging, and/or pipe stringing. Other existing OC San or City property would be utilized as necessary for staging and intermediate storage for the installation of the sewer pipelines, or the contractor would be responsible for securing suitable temporary equipment

storage/staging site(s) prior to construction and implementing applicable environmental commitments (see *Section 2.6*) at the staging area(s).

As noted in the PEIR, OC San understands the importance of consistency with the goals and policies identified within local jurisdictions' General Plans and other local ordinances and plans; however, per California Government Code Section 53091, OC San, as a wastewater treatment facility, is exempt from local zoning and building ordinances. As part of standard practice, OC San would coordinate with local jurisdictions to the extent feasible during implementation of the proposed project (see OC San General Requirements 9 (GR-9)) Public Convenience and Access, for example) to avoid and/or minimize potential impacts.

a) Physically divide an established community?

The proposed project would be constructed entirely within existing roadways and would temporarily require lane closures that would impact access to adjacent land uses and short-term vehicle trip lengths. However, no streets would be fully closed and continued access to established communities and businesses would be maintained during construction (see *Section 3.17 Transportation*). In addition, impacts would not permanently affect the existing surrounding established communities. The project would be constructed completely belowground, and all pipeline and maintenance hole construction areas would be restored to pre-construction conditions after construction is complete (i.e., no permanent disturbance footprint). The temporary construction staging areas would be located on land that is vacant and, if necessary, within roadway right-of-ways. The proposed project would not permanently interfere with the pedestrian, bicycle or vehicle circulation and would not result in a physical barrier within the existing community. Therefore, the proposed project would have no impact related to physically dividing an established community.

Mitigation Measures

None required.

Significance Determination

No impact.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The proposed project would replace a portion of the Taft Branch regional sewer pipeline to maintain OC San's wastewater conveyance system, meet existing and projected demands for wastewater conveyance in the OC San service area, and comply with existing wastewater treatment and disposal regulations. The project would be located within existing roadways and staging areas located on vacant land (and within the Taft Avenue right-of-way if necessary), and the project area would be returned to pre-construction conditions after construction is completed. Construction and operation of the project would not require or result in changes to land use or zoning designations. Furthermore, as part of standard practice, OC San would coordinate with all applicable local jurisdictions to the extent feasible during construction of the project to avoid and/or minimize potential impacts.

As noted in the PEIR, the City of Orange General Plan (City of Orange 2015b) land use policies that are applicable to the proposed project include:

- Goal 1.0. Ensure water, sewer, and storm drain systems that meet the needs of residents and businesses.
- Policy 1.1. Provide sufficient levels of water, sewer, and storm drain service throughout the community.

The proposed project would replace and rehabilitate a portion of the existing sewer system to meet the needs of existing and planned future demands for wastewater service and would be consistent with the relevant General Plan goals. Therefore, impacts from the project would be less than significant with respect to a conflict with an applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Mitigation Measures

None required.

Significance Determination

Less than significant.

3.12 Mineral Resources

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
Would the Project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	[]	[]	[]	[X]
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	[]	[]	[]	[X]

Discussion

Historically, the City of Orange contributed to the gravel industry, but over the years the City's mineral resources have been mostly exhausted and all state-designated Mineral Resource Zones (MRZs) have been declassified either as a result of completed mining activity or urban development. Remaining mineral resource deposits are primarily limited to the sand and gravel resources contained in and along the Santa Ana River and Santiago Creek. Sand and gravel resources are referred to collectively as "aggregate." Aggregate is the primary component of Portland cement concrete, a material widely used in the

construction industry. As these resource deposits are important to the region's economy, the City of Orange General Plan Land Use Element (City of Orange 2015a) provides a means to protect the resource areas from premature urbanization through protected land use designations. The Resource Area land use designation allows for only aggregate extraction or recreation uses. The Open Space designation does not permit mining but does prevent urbanization, making it possible to mine the areas at some future date if necessary. One area within the northeastern portion of the city (surrounding two groundwater recharge pits [Bond Pits] on Santiago Canyon Road) and one area northwest of the City (approximately 18-acre site of the R.J. Noble Company) are designated as Resource Areas. Open Space designation areas are located at the west end of Lincoln Avenue, areas adjacent to Santiago Creek, and the north, east, and west sides of Irvine Lake in East Orange (City of Orange 2015).

a-b) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

The proposed project would rehabilitate wastewater conveyance pipelines within roadway right-of-ways and previously disturbed land. The proposed project area is not located within designated Resource Area or Open Space land as classified on the City of Orange General Plan Land Use Policy Map (City of Orange 2015b). All disturbed areas would be restored to pre-construction conditions after construction is complete (i.e., no permanent footprint). In addition, construction and operation of the project would not require or result in changes to land use or zoning designations. No impact on the availability of a known mineral resource or the availability of an important mineral resource recovery site that is of value locally, or to the region or residents of the state would occur as a result of construction or operation of the proposed project.

Mitigation Measures

None required.

Significance Determination

No impact.

3.13 Noise

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise	[]	[X]	[]	[]

ordinance, or applicable standards of other agencies?

- | | | | | |
|---|-----|-----|-------|-------|
| b) Generation of excessive groundborne vibration or groundborne noise levels? | [] | [] | [X] | [] |
| c) For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels? | [] | [] | [] | [X] |

Discussion

A Noise Impact Analysis (**Appendix E**) was conducted for the proposed project and is relied upon for the analysis in this IS/MND. Noise is generally defined as unwanted sound. Noise can cause hearing impairment for humans, and may also disrupt everyday activities such as sleep, speech, and activities requiring concentration. Noise can also interfere with the activities of wildlife, especially nesting birds. Noise-sensitive land uses are generally those where excess noise would disrupt how humans and/or wildlife use the land. Land uses such as schools, churches, and hospitals would typically be considered noise-sensitive. Noise may be generated by mobile (i.e., line) sources (for example, cars, trains, and aircraft) or stationary (i.e., point) sources (for example, machinery, airports, and construction sites).

Noise is described using specific terminology, as summarized below. The following explanations are adapted from the U.S. Department of Transportation Federal Highway Administration (FHWA) *Construction Noise Handbook* (FHWA 2006) and the U.S. Department of Transportation Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018):

- **A-Weighting.** A method used to account for changes in level sensitivity as a function of frequency. A-weighting de-emphasizes the high and low frequencies and emphasizes the mid-frequencies, in an effort to simulate the relative response of the human ear.
- **Community Noise Equivalent Level (CNEL).** A 24-hour time-averaged sound exposure level adjusted for average-day sound source operations. The adjustment includes a 5-dB penalty for noise occurring between 7:00 pm and 10:00 pm, and a 10-decibel (dB) penalty for those occurring between 10:00 pm and 7:00 am, to adjust for the increased impact of nighttime noise on human activities.
- **Decibel (dB).** A unit of measure of sound level. dB is calculated by comparing sound pressure to a sound pressure reference (the threshold of human hearing) and are measured using a logarithmic scale. A-weighted decibels are expressed as dBA or dB(A).
- **Equivalent Sound Level (L_{eq}).** The equivalent sound level describes a receiver's cumulative noise exposure from all events over a specified period of time.

- **Ground Effect.** The change in sound level, either positive or negative, due to intervening ground between source and receiver. Ground effect is influenced by multiple factors, including ground characteristics, source-to-receiver geometry, and the spectral characteristics of the source. A commonly used rule-of-thumb for propagation over soft ground (e.g., grass) is that ground effects will account for about 1.5 dB per doubling of distance. However, this relationship tends to break down for distances greater than about 100 to 200 ft.
- **Line Source.** A source of noise that is created by multiple point sources moving in one direction; for example, a continuous stream of roadway traffic, which radiates sound cylindrically. Sound levels measured from a line source decrease at a rate of 3 dB per doubling of distance.
- **Noise Barrier.** The structure, or structure together with other material, that potentially alters the noise at a site.
- **Point Source.** A source that radiates sound spherically. Sound levels measured from a point source decrease at a rate of 6 dB per doubling of distance.

Groundborne vibration may occur when heavy equipment or vehicles create vibrations in the ground, which can then propagate through the ground to buildings, creating a low-frequency sound. Groundborne vibration can be described by both its amplitude and frequency. Amplitude may be characterized by particle velocity, which is measured in inches or millimeters per second. Vibration can be felt outdoors, but the perceived intensity of vibration impacts is much greater indoors, due to the shaking of the structure. Groundborne vibrations can be a source of annoyance to humans due to a “rumbling” effect, and such vibrations may also cause damage to buildings. Groundborne vibration is discussed in terms of these impacts on humans and structures. The annoyance potential of groundborne noise is typically characterized with the A-weighted sound level. Some of the most common sources of vibration come from trains, transit vehicles, construction equipment, airplanes, and large vehicles. Several land uses are especially sensitive to vibration, and therefore have a lower vibration threshold. The following vibration terminology have been adapted from the FTA’s *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018):

- **Vibration Decibels (VdB).** The vibration velocity level in decibel scale.
- **Peak Particle Velocity (PPV).** The peak signal value (maximum positive or negative peak) of the vibration signal. PPV is often used in monitoring of construction vibration (such as blasting) because it is related to the stresses that are experienced by buildings and is not used to evaluate human response. PPV is usually expressed in inches/second in the United States.
- **Root Mean Square (rms).** The rms is used to describe the smoothed vibration amplitude. The rms amplitude is used to convey the magnitude of the vibration signal felt by the human body, in inches/second. The average is typically calculated over a one-second period. The rms amplitude is always less than the PPV and is always positive.

Noise Standards

The PEIR identified the County of Orange Noise Ordinance (Division 6, Noise Control), which sets a standard of 55 dBA during the daytime and 50 dBA during the nighttime in residential zones and prohibits noise that:

- exceeds the standard for more than 30 minutes; or
- exceeds the standard by 5 dBA for more than 15 minutes; or

- exceeds the standard by 10 dBA for more than 5 minutes; or
- exceeds the standard by 15 dBA for more than 1 minute; or
- exceeds the standard by 20 dBA for any period of time.

The County of Orange Noise Ordinance exempts noise associated with construction activities that take place between 7:00 am and 8:00 pm Monday through Saturday.

The proposed project is located in the City of Orange. The City of Orange (Code of Ordinances Chapter 8.24 – Noise Control) has set exterior noise standards at residential properties of the following, unless ambient noise levels exceed the following standards, in which case the exterior noise cannot exceed the ambient levels (up to 70 dBA):

- 55 dBA hourly average L_{eq} during the daytime (7:00 am – 10:00 pm)
- 50 dBA hourly average L_{eq} at night (10:00 pm – 7:00 am)
- 70 dBA maximum level L_{max} during the daytime (7:00 am – 10:00 pm)
- 65 dBA hourly average L_{max} at night (10:00 pm – 7:00 am)

The City's Noise Control ordinance does not set noise standards for commercial areas. The residential noise standard applies to non-transportation, fixed sources of noise (e.g., construction equipment moving around a fixed construction site, industrial equipment, pumps, fans, generators). Noise associated with construction is exempt from this standard, as long as it occurs between 7:00 am and 8:00 pm Monday through Saturday, or 9:00 am and 8:00 pm Sundays and federal holidays. Noise associated with any maintenance or construction activity undertaken by a public utility within street right of way is also exempt from the City Noise Ordinance, regardless of the time of day it is undertaken.

The City Noise Ordinance does not provide a quantitative limit to the noise levels that may be created from construction activities that are exempt. Therefore, in order to determine if the proposed project's construction activities would create a significant substantial temporary noise increase, the Noise Impact Analysis (**Appendix E**) identified construction noise guidance provided by the FTA, which is based on extensive studies by the FTA and other governmental agencies on the human effects and reaction to noise. The FTA general construction noise criteria indicate that a significant construction noise impact would occur if construction noise exceeds 90 dBA L_{eq} during the daytime or 80 dBA L_{eq} during the nighttime at any nearby noise-sensitive receptors.

Existing Conditions

The project area is fully built out. Surrounding land uses include commercial, residential, and public facilities. The pipeline alignment also crosses State Route 55. As described in the PEIR and Noise Impact Analysis, transportation is the major source of noise in the project area, with vehicle traffic being the primary noise source. The PEIR conducted ambient noise measurements and found that ambient noise at the representative FMP collection systems ranged from 66 to 69 dBA L_{eq} .

Noise-sensitive receptors adjacent to or in the vicinity of pipeline alignment include the single-family and multi-family residences on either side of the proposed alignment along Taft Avenue, Sacramento Street, Breckenridge Street, and Meats Avenue. Schools and faith-based facilities are also located along the

alignment. The pipeline alignment would be located in the existing roadway right-of-way, typically around 25 feet from the nearest receptor.

The pipeline alignment at the west end is surrounded by commercial and residential land uses. Moving east along Taft Avenue, land uses are primarily residential. Along Tustin Street, there are commercial land uses and a SCE power station. The pipeline alignment crosses under State Route 55, then turns north onto Sacramento Street, a residential street. On North Breckenridge Street and Meats Avenue, the alignment is surrounded by residential land uses.

Noise measurements were taken in the vicinity of the project site and are summarized in the Noise Impact Analysis (**Appendix E**). To understand the potential impact of proposed nighttime construction noise, 24-hour noise measurements were taken at the nearest sensitive receptors to the Tustin Street portion of the project site. For the rest of the project area where construction would occur during the daytime, short-term noise measurements were taken between 10 am and 11 am. At the Tustin Street portion of the project site, existing nighttime noise levels ranged from 59.1 to 62 dBA L_{eq} , and existing daytime noise levels ranged from 61.4 to 64.3 dBA L_{eq} . At the short-term noise measurement locations on the project site, daytime noise levels ranged from 55.8 to 63.8 dBA L_{eq} .

a) Generation of substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction

Construction of the proposed project is expected to last 24 months. However, the trenching, pipeline installation, and maintenance hole installation phase is estimated to last approximately 12 months and would involve the most noise-generating activities from use of heavy construction equipment and hauling. The construction equipment that would be used can be found in *Section 2.4 Proposed Project Description*. The typical noise level of each piece of construction equipment that would be used for the Project is shown in **Table 3-11**.

Table 3-11: Typical Construction Equipment Noise Levels

Equipment	Typical Noise Levels (dBA, at 50 feet)
Backhoe/Loader	78
Compressor	78
Concrete Saw	90
Crane	81
Drill Rig	79
Dump Truck	76
Generator	81
Hydraulic Excavator	81
Pavement Breaker	90 ¹
Paver	77
Pick-up Trucks	75
Pump	81
Sweeper	82

Equipment	Typical Noise Levels (dBA, at 50 feet)
Utility Truck	74 ¹
Water Truck	74 ¹
Welder	74

Source: FHWA 2006, and CalEEMod default equipment mix

1. Pavement breaker noise level was assumed to be comparable to a jackhammer. Water truck noise was assumed to be comparable to a tractor. Utility truck noise was assumed to be comparable to a flat-bed truck.

As summarized in *Section 2.4 Proposed Project Description*, construction of the proposed pipeline would occur during daytime hours for Segments 1, 2, 3, 5, 6, and 7. Segment 4, which is in or adjacent to Tustin Street, would be constructed at night in order to minimize traffic impacts on the five-lane street within a commercial and industrial area. Potential pipeline alignment and staging areas are shown in **Figure 2-2**. Pipelines would be constructed using a combination of open cut or trenchless methods (with techniques for certain segments still under evaluation as described in *Section 2.4.1 Project Details by Segment*). Pipeline construction would include noise-generating activities such as saw cutting of the pavement, trench excavation, trench backfill and compaction, and site restoration/pavement replacement. Pipeline construction is expected to occur at a rate of 50 linear feet per day. Therefore, construction noise impacts at any one receptor would be of short duration as construction would move along the pipeline alignment as it is completed.

During project construction, truck trips would generate noise along haul routes. Noise-sensitive land uses along haul routes, including residences, would be exposed to truck noise during construction. The nearest noise-sensitive receptors to the project site are homes located on both sides of Meats Avenue, Breckenridge Street, Sacramento Street, and on Taft Avenue west of Tustin Street. The amount of noise generated by temporary construction activities is affected by the vehicle speed, load, road condition, and other factors. As noted in the PEIR and Noise Impact Analysis, road noise is a major noise source in the area. Construction truck noise that occurs in noisy locations is generally less disruptive than the same noise would be in a quieter location.

Table 3-12 presents noise levels from temporary construction activities associated with pipeline construction, including mobilization/ utility potholing; trenching/ pipeline/ MH installation; final paving /restoration; and demobilization. The equipment list was derived from CalEEMod, consistent with the methodologies in the PEIR. The noise levels were modeled using the Federal Highway Administration Roadway Construction Noise Model (RCNM). Model results are included in **Appendix E**.

Table 3-12: Noise Level from Construction within the Roadway Right-of-Way at nearest Residential Land Uses

Pipeline Segment	Time of Construction	Distance to Nearest Residence (ft)	Construction Noise Level (dBA L_{eq})	FTA Construcion Noise Standard (dBA)/ Exceed?	Ambient Noise Level (dBA L_{eq})/ Exceed?
1 - Taft Ave (west)/ Glassel	Daytime	65	73	90/ No	62.4/ Yes
2 - Taft Ave (west)/ Cambridge	Daytime	60	83	90/ No	62.4/ Yes
3 - Taft Ave/ Tustin Street	Daytime	55	84	90/ No	64.3/ Yes
4 - Tustin St	Nighttime	220	67	80/ No	59.1/ Yes
5 - Taft Ave (east)	Daytime	50	85	90/ No	69.8/ Yes
6 - Sacramento St	Daytime	50	85	90/ No	55.8/ Yes
7 - Meats Ave	Daytime	50	85	90/ No	63.8/ Yes

Source: **Appendix E.**

The level of noise from pipeline construction would be associated with construction undertaken by a public utility within street right of way, and would therefore be exempt from – and not conflict with – local noise standards. The project's temporary construction activities would not exceed FTA general standards for human effects and reaction to noise. Furthermore, it would be temporary; construction noise would not be centered at a single receptor for the entire duration of construction. The proposed project would involve some nighttime work, but the nighttime work would occur in a commercial neighborhood, along Tustin Avenue, at least 200 feet from the nearest residential property line. Noise attenuates greatly with distance. For localized sources of noise grouped closely together, such as a construction site, noise attenuates at a rate of approximately 6 dB per doubling of distance (FTA 2018). Thus, the nighttime construction noise at the nearest residential property line would be around 67 dBA.

Construction noise impacts from the proposed staging area are presented in **Table 3-13**. The City provides different noise standards for the pipeline construction activities undertaken within a street right of way, versus the activities at the proposed staging areas; therefore, the pipeline construction activities and staging area activities were analyzed separately.

Table 3-13: Nighttime Noise Level from Construction Staging Area at nearest Residential Land Uses

Location of Receptors	Distance to Nearest Residence (ft)	Construction Noise Level (dBA L_{eq})	Nighttime Noise Standard (dBA L_{eq})/ Exceed?	Ambient Noise Level (dBA L_{eq})/ Exceed?
Homes to the West	380	61	50 dBA/ Yes	64/ No
Homes to the East	100	68	50 dBA/ Yes	64/ Yes

Source: **Appendix E**

The construction staging area located on vacant land on Taft Avenue may be used during the proposed nighttime construction work on Tustin Street. There may be other construction staging areas used during construction of the proposed project; however, all other potential construction staging areas would only be used during the daytime when construction noise is exempt from City noise restrictions. For construction activities that occur during nighttime hours, the City Noise Ordinance limits construction noise to the exterior noise standards of 50 dBA L_{eq} and 65 dBA L_{max} , or ambient noise level (up to 70 dBA), whichever is higher.

Compared to the representative ambient noise levels measured for the PEIR and Noise Impact Analysis, construction noise levels of the proposed project pipeline construction would at times be higher than ambient. Noise associated with construction that occurs during the day (i.e., between 7:00 am and 8:00 pm Monday-Friday or between 9:00 am and 8:00 pm Sundays and holidays) is exempt from the City's exterior noise standards. Therefore, construction noise associated with pipeline segments 1, 2, 3, 5, 6, and 7 would not conflict with the City's noise standards. The proposed project would implement **Mitigation Measure NOI-1**, Noise Reduction Measures and **Project Design Feature, NOI-1**, Public Outreach, as specified in the PEIR. **Mitigation Measure NOI-1** requires measures such as keeping equipment in proper working order, locating stockpiles and staging areas away from sensitive receptors, and noise reduction measures such as exhaust mufflers. **Project Design Feature NOI-1** requires outreach to surrounding residents and businesses to notify them of construction work and timing, and require the contractor to address noise complaints. Although temporary construction noise associated with pipeline segments 1, 2, 3, 5, 6, and 7 would be less than significant, these measures would reduce noise even further.

Noise associated with nighttime construction for pipeline segment 4 has the potential to exceed the ambient noise level at the nearest residential receptor and, therefore, conflict with the City's noise control ordinance. The proposed project would be required to implement **Mitigation Measure NOI-2**, Nighttime Noise Reduction Measures. **Mitigation Measure NOI-2** requires noise barriers that will ensure ambient nighttime noise levels at nearby residential receptors are not exceeded during nighttime work.

Compared to the City nighttime noise standards for residential areas, construction noise levels of the proposed project staging area construction activities would at times exceed the 50 dBA L_{eq} standard. **Mitigation Measure NOI-3**, Time of Day Restrictions, requires that if the staging area on the east side of State Route 55 is used, all activities within this staging area shall be limited to when construction activities are exempt from the City noise standards as detailed in Section 8.24.050(E) of the City of Orange Municipal Code: 7:00 am and 8:00 pm Monday through Saturday, or 9:00 am and 8:00 pm Sundays and federal holidays.

Additionally, OC San General Requirements (GR-6-B) require noise control measures, such as proper equipment maintenance and use of mufflers on internal combustion engine equipment; these measures would further reduce noise from the proposed project. OC San General Requirement GR-6-B, Noise Control, states:

- Work hours are as stated in the General Requirements under the section entitled "Length of Workday and Workweek / Prevailing Wage" which states, "Eight (8) hours of labor shall constitute a calendar day's labor for employees" and "A working day shall be Monday through Friday and shall be between 7:00 am and 3:30 pm" Changes to work hours may require the use of noise control measures." Note, City of Orange preliminary permitting for this project has indicated work hours shall be 8:30 am to 4:30 pm.

- All equipment used during construction shall be muffled and maintained in good operating condition. All internal combustion engine driven equipment shall be fitted with intake and exhaust mufflers that are in good condition.
- Back up bells on equipment may only be operated between 7:00 am and 5:00 pm. Air compressors and diesel engine operation will not be permitted between 5:30 pm and 7:00 am. Unless otherwise directed by the OC San Project Engineer, temporary generators will be permitted to operate between 7:00 am and 5:00 pm providing that the generator noise level shall not exceed 85 dB at 3 feet. For projects not located on OC San property, noise control shall comply with ordinances for the city where the Work is being performed.

With the implementation of these measures, impacts would be reduced to less than significant.

Operations

Once operational, the below-ground conveyance pipelines would not generate noise. Noise may be associated with occasional vehicle maintenance trips, but these trips would be infrequent and the resulting noise would be negligible. The project would have less-than-significant long-term operational noise impacts.

Mitigation Measures

The following design feature and mitigation measures shall be incorporated into the project to reduce potential construction noise impacts. The following design feature and mitigation measure NOI-1 were identified in the FMP PEIR as Project Design Feature NOI-1 and Mitigation Measure NOI-1. The proposed project's noise impacts would be less than significant with mitigation incorporated.

Project Design Feature NOI-1: Public Outreach.

To address construction noise impacts, the Orange County Sanitation District (OC San) has a process in place as follows:

- A. Public outreach is conducted in communities that could be impacted by construction activities so that the public is aware of the work that must be conducted, where the work will occur, and the timing of the proposed work.
- B. At least five (5) days prior to the start of construction activities, the OC San will notify the surrounding residents and businesses by mail or other means of distribution. For projects located outside of Plant 1 or Plant 2, the construction contractor will post signs in the project vicinity that identify the Orange County Sanitation District as the project owner and a general contract phone number. Sign location(s) will be identified with local jurisdiction approval.
- C. Once work begins, the contractor has the responsibility to address noise and vibration-related complaints.

Mitigation Measure NOI-1: Noise Reduction Measures.

For Facilities Master Plan (FMP) projects located within 500 feet of noise-sensitive receivers (residences, hotels and motels, educational institutions, libraries, hospitals, and clinics), the following measures shall be implemented:

- A. All mobile or fixed noise-producing equipment used on an FMP project that is regulated for noise output by a local, state, or federal agency shall comply with such regulation while in the course of program activity.
- B. Construction equipment shall be properly outfitted and maintained with manufacturer-recommended noise-reduction devices to minimize construction-generated noise.
- C. Electrically powered equipment shall be used instead of pneumatic or internal-combustion-powered equipment, where feasible.
- D. Stationary noise sources such as generators or pumps shall be located at least 100 feet from noise-sensitive land uses as feasible.
- E. Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.
- F. Construction site and haul-road speed limits shall be established and enforced during the construction period.
- G. As feasible, the hours of construction, including noise-generating activities and all spoils and material transport, shall be restricted to the time periods and days permitted by the local noise or other applicable ordinances. As necessary, the OC San shall coordinate with the applicable local jurisdiction regarding activities that are not consistent with local ordinances to avoid/minimize impacts.
- H. The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. Additionally, pursuant to Occupational Safety and Health Act Sections 1926.601(b)(4) and 1926.602(a)(9), a device that uses broadband "white noise" instead of a single-tone alarm may be used if it is shown to be effective.
- I. The Orange County Sanitation District or its designees shall coordinate with local jurisdictions and sensitive receptors regarding the proposed FMP to address any potential project-specific noise-related issues prior to commencement of construction activities.
- J. Noise-reduction measures such as exhaust mufflers, sound blankets or temporary sound walls shall be used to reduce noise from noise-generating equipment and activities during construction.

Mitigation Measure NOI-2: Nighttime Noise Reduction Measures.

In order to ensure construction noise at nearby residences does not exceed the standards detailed in Section 8.24.050(E) of the City of Orange Municipal Code, prior to the start of nighttime construction for Pipeline Segment 4, 500 feet on Tustin Street, OC San shall ensure the following nighttime noise reduction measures are in place:

- The construction contractor shall establish a current nighttime ambient noise level at the nearest residential property, 1612 E Briardale Avenue, or accept on the 24-hour average nighttime ambient noise level measured in the Noise Impact Analysis (**Appendix E**) of 59.1 dBA L_{eq} .

- The contractor shall install temporary construction noise barriers. These barriers shall block the line of sight between the equipment and the nearest residential property and shall provide a minimum of 10 dBA of noise attenuation. The construction noise barrier shall be constructed with no gaps or perforations. It shall remain in place until the conclusion of the nighttime construction activities.
- The project plans and specifications shall include documentation verifying the inclusion of an appropriate noise barrier.
- The construction contractor shall monitor noise levels during nighttime construction activities, as needed, to ensure they do not exceed ambient noise levels of 70 dBA, whichever is less.

Mitigation Measure NOI-3: Time of Day Restrictions.

In order to ensure construction noise at nearby residences does not exceed the City of Orange noise standards as detailed in Section 8.24.050(E) of the City of Orange Municipal Code, if the Staging Area located on the east side of State Route 55 is used as part of the proposed project, all activities within this Staging Area shall be limited to when construction activities are exempt from the City noise standards as detailed in Section 8.24.050(E) of the City of Orange Municipal Code. No time-of-day restrictions are placed on the SCE Staging Area located on the west side of State Route 55.

Significance Determination

Less than significant with mitigation incorporated.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Construction activities associated with the proposed project would have the potential to generate low levels of groundborne vibration. Groundborne vibrations propagate through the ground and decrease in intensity quickly as they move away from the source. Vibrations with a PPV of 0.2 inches/second or greater have the potential to cause damage to non-engineered timber and masonry buildings (FTA 2018). The *Transit Noise and Vibration Impact Assessment Manual* provides average source levels for typical construction equipment that may generate groundborne vibrations. Most construction equipment that would be used in construction of the project is not expected to generate substantial groundborne vibration. For example, a loaded truck produces 0.076 PPV at a distance of 25 feet, and a pavement breaker produces 0.035 PPV at a distance of 25 feet.

According to the FTA's *Transit Noise and Vibration Impact Assessment Manual*, 75 VdB is the threshold for human annoyance from groundborne vibration noise when events are occasional. Typical vibration dB levels for a loaded truck are 86 VdB at a distance of 25 feet, and a pavement breaker typically produces 79 VdB at a distance of 25 feet (see **Appendix E**). Groundborne vibration and noise tends to be more perceptible and disruptive during nighttime hours when people are generally indoors and asleep. Pipeline construction along residential areas (Segments 1, 2, 3, 5, 6, and 7) would occur only between the hours of 7:00 am and 8:00 pm on weekdays, and would therefore avoid impacts during the night when they would be more likely to be noticed. Nighttime construction work on Segment 4 would occur on portions of the alignment near commercial areas, which would not be sensitive to nighttime noise. Construction equipment could be used as close as 50 feet from the nearest sensitive receptors.

None of the construction equipment to be used would exceed the threshold of 0.2 inch per second PPV at the nearest residences (see **Appendix E**). However, loaded trucks, which would generate the greatest vibration out of the construction fleet, would produce levels of vibration noise that has the potential to cause human annoyance. Groundborne vibration noise from loaded trucks would attenuate to below 75 VdB at a distance of 70 feet (FTA 2018), and vibration from loaded trucks would be temporary and brief. Vibrations associated with pipeline construction would occur infrequently and would be short in duration. Additionally, pipeline construction would move along the alignment at a rate of 50 linear feet per day and would not remain in the same location for an extended period of time; therefore, sensitive receptors near the pipeline alignment would not experience vibrations for the entire duration of project construction. Exposure to groundborne noise would be temporary, sporadic, and limited in duration. Once operational, the pipeline would not produce groundborne vibration or groundborne noise. The impact would be less than significant.

Mitigation Measure

None required.

Significance Determination

Less than significant.

c) For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?

The project is not located within the vicinity of an airport. The closest airports are the John Wayne International Airport and Fullerton Municipal Airport, which are both over five miles from the project. The project would not expose residences or workers to excessive aircraft noise and there would be no impact.

Mitigation Measures

None required.

Significance Determination

No impact.

3.14 Population and Housing

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
Would the Project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	[]	[]	[]	[X]
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	[]	[]	[]	[X]

Discussion

OC San provides wastewater collection, treatment, and disposal services for approximately 2.6 million people in central and northwest Orange County. Over the next 20 years, the population of the service area is expected to increase by 8.3 percent (OC San 2017).

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The proposed project would not directly induce unplanned population growth because no new housing or permanent employment are proposed or would result from construction and operation of the project. The proposed project involves expansion of, and improvement to, OC San's sanitary sewer infrastructure within its existing service area. Operation of the project would service existing and projected wastewater demand and is consistent with planned growth that would occur with or without the project. Inspection and repair, if necessary, of the proposed project would be incorporated into OC San's existing O&M activities; no new staff would be required to serve the project. Therefore, the proposed project would not directly or indirectly induce unplanned population growth. No impact would occur.

Mitigation Measures

None required.

Significance Determination

No impact.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Construction and operation of the project would occur entirely within existing roadways and staging would occur within vacant lots (and within the roadway right-of-ways, if necessary). The project would not displace existing people or houses or require the construction of replacement housing. No impact would occur.

Mitigation Measures

None required.

Significance Determination

No impact.

3.15 Public Services

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
Would the Project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:	[]	[]	[]	[X]
i) Fire protection?	[]	[]	[]	[X]
ii) Police protection?	[]	[]	[]	[X]
iii) Schools?	[]	[]	[]	[X]
iv) Parks?	[]	[]	[]	[X]
v) Other public facilities?	[]	[]	[]	[X]

Discussion

Fire Protection

The City of Orange Fire Department provides fire, paramedic, and ambulance services within the proposed project area. Station #3, located at 1910 N Shaffer Street, is approximately one-quarter mile away from the project area and is the closest of the City's eight stations. Paramedic teams are located at all eight stations, of which three also provide ambulance service. The average response time is around three to five minutes (City of Orange 2023).

Police Protection

The City of Orange Police Department provides police protection and crime prevention services within the proposed project area. The Department's headquarters is located at 1107 N Batavia Street, approximately 1 mile from the project area. In addition, the Department operates several substations, including substations located in Santiago Canyon, at the Block of Orange.

Schools

The proposed project is located within the Orange Unified School District, which encompasses all or part of the cities of Anaheim, Garden Grove, Orange, Santa Ana, and Villa Park, as well as some unincorporated county areas. The District operates 46 schools including preschools, elementary schools, middle schools, high schools, and alternative education schools (OUSD nd). The Taft Elementary school, located at 1080 North California Street, is within one-quarter mile of the project area. Private schools within one-quarter mile of the project area include Saint Norbert Catholic School (300 E Taft Avenue), and Children's House Preschool (1400 E Taft Avenue).

Parks

The City of Orange Community Services Department maintains and manages 23 parks and recreational facilities within the proposed project area. Construction and operation of the proposed project would occur entirely within existing roadways and vacant parcels. There are no City parks within or adjacent to the project area. Shaffer Park located at 1930 N Shaffer Street is the closest and approximately one-quarter mile from the project area.

Other Public Facilities

The City of Orange Public Library is located at 407 E. Chapman Avenue, approximately 2 miles from the project area. There are three hospitals within the City of Orange: University of California, Irvine Medical Center (101 The City Drive South) approximately three miles from the project area, St. Joseph Hospital (1100 West Stewart Drive) approximately 2.5 miles from the project area, and Chapman Global Medical Center (2601 E Chapman Avenue) approximately 2 miles from the project area.

a.i) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: Fire protection?

The proposed project would not include construction of new or expanded OC San facilities that would increase the number of fire protection facilities, or indirectly cause population growth or development, resulting in the need for additional fire protection services. The proposed project would upgrade, replace, and rehabilitate aging sewer pipelines within OC San's wastewater collection and treatment system, and operation would not result in a population increase. The need for new or expanded public facilities, such as fire protection facilities, is typically associated with a population increase. The project would therefore not substantially increase the need for new fire department staff or new facilities and no impact would occur.

a.ii) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: Police protection?

The proposed project would not include construction of new or expanded OC San facilities that would increase the number of police protection facilities, or indirectly cause population growth or development, resulting in the need for additional police protection services. The proposed project would upgrade, replace, and rehabilitate aging sewer pipelines within OC San's wastewater collection and treatment system, and operation would not result in a population increase. The need for new or expanded public facilities, such as police protection facilities, is typically associated with a population increase. The project would therefore not substantially increase the need for new police fire department staff or new facilities and no impact would occur.

a.iii) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: Schools?

The proposed project would not change existing demand on schools because the project would serve existing and planned communities. Construction of the proposed project does not include housing, and operation would not result in new employment or population growth that would result in an influx of students. No new school facilities would need to be built to maintain class size ratios or other performance objectives. As a result, no impact on school facilities would occur.

a.iv) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: Parks?

The City of Orange Municipal Code 16.60.040 Park Acreage Standard requires 3 acres of useable parkland for every 1,000 residents, which is the minimum parkland dedication allowed by the Quimby Act for residential subdivisions (City of Orange 2020a). The proposed project would not change existing demand on City parks or recreational facilities because the project does not propose new housing units, nor would it directly or indirectly induce population or permanent employment within the area. Construction and operation of the project would not necessitate expansion of existing or construction of new parks or recreational facilities to maintain the City's existing park acreage standard. Therefore, no impact on park facilities would occur.

a.v) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: Other public facilities?

The proposed project would not change existing demand on other public facilities because the project does not propose new housing units, nor would it directly or indirectly induce population or permanent employment within the area. Construction and operation of the project would not necessitate expansion of existing or construction of new public facilities such as libraries or hospitals. Therefore, no impact on other public facilities would occur.

Mitigation Measures

None required.

Significance Determination

Less than significant with mitigation incorporated.

3.16 Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	[]	[]	[]	[X]
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	[]	[]	[]	[X]

Discussion

According to the City of Orange Zoning Map, adjacent parcels are classified as single family residential, multi-family residential, commercial, and industrial (City of Orange 2022). As discussed under *Section 3.15 Public Services*, there are no parks or recreational facilities within the project area. There are also no regional,

state, multi-use, or proposed trails within the project area. The Santa Ana River Trail is the closest public trail to the project area and is located approximately 1 mile to the east. Segments of the project alignment along Meats Avenue and Taft Avenue are within existing Class II and III Bike Lanes. Class II On-road bike lanes are located along arterial roadways that are delineated by painted stripes and other features. Class III On-road bike routes share use with motor vehicle traffic; they provide a route that is signed but not striped (City of Orange 2015c). Potential impacts of the project on bicycle facilities are discussed in *Section 3.17 Transportation*.

a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The proposed project would serve existing and planned development that would occur with or without the project. The proposed project does not include residential housing and would not induce permanent employment or population growth that would permanently increase the use of the parks and recreational facilities. The project would not increase the use of existing parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. Therefore, the proposed project would have no impact.

Mitigation Measures

None required.

Significance Determination

No impact.

b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Implementation of the proposed project would not require construction or expansion of recreational facilities which could have an adverse physical impact on the environment. As a result, no impact would occur.

Mitigation Measures

None required.

Significance Determination

No impact.

3.17 Transportation

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
Would the Project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	[]	[X]	[]	[]
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	[]	[]	[X]	[]
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	[]	[X]	[]	[]
d) Result in inadequate emergency access?	[]	[X]	[]	[]

Discussion

Local access in the project area is provided by Taft Avenue, Tustin Street, Meats Avenue, Glassell Street, Cambridge Street, and Santiago Boulevard. The project alignment is transected by, and would cross under, State Route 55. The City of Orange does not have designated truck routes. Public transportation in the project area consists of bus service provided by the Orange County Transit Authority (OCTA). Bus routes 46, 60, 71, and 167 operate along the proposed project alignment along Taft Avenue, Tustin Street, and Meats Avenue. Bicycle facilities along the project alignment consist of a Class 2 bike lane on both the north and south sides of Taft Avenue between Glassell Street and Tustin Street; along Taft Avenue between Tustin Street and Sacramento Street; and along Meats Avenue between Breckenridge Street and Santiago Boulevard.

The City of Orange Traffic Division requires that the traffic and circulation impacts of proposed development projects be analyzed through the preparation of a traffic impact analysis prepared in conformance with Transportation Division requirements. The *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* (City of Orange 2020c) identifies the required contents and methodology, including thresholds for when the traffic impact analysis must include a level of service analysis and/or a VMT impact analysis, as required by CEQA. Certain projects, because of their size, nature, or location, are exempt from producing a level of service analysis. Generally, these projects are local-serving, generate less than 100 peak hour trips, and add 50 or fewer peak hour trips to any one intersection. Likewise, some

projects and activities are exempt from producing a VMT analysis. Similar to the level of service exemptions, these projects are generally local-serving or generate less than 110 daily vehicle trips (City of Orange 2020c).

On September 3, 2020, the SCAG adopted Connect SoCal, SCAG's 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy. The plan is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The plan details how the region will address its transportation and land use challenges and opportunities in order to achieve its regional emissions standards and GHG reduction targets. The Connect SoCal plan represents the vision for Southern California's future, including policies, strategies, and projects for advancing the region's mobility, economy, and sustainability through 2040 (SCAG 2020).

The City of Orange General Plan Public Safety element identifies generalized evacuation corridors. Although emergency egress may vary depending on the type and scale of emergencies, emergency evacuations in the City of Orange will most often take place on Chapman Avenue, Katella Avenue, Glassell Street, Lincoln Avenue, Orangewood Avenue, and Hewes Street (City of Orange 2010).

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Project construction is estimated to last 24 months. Additional details on the construction schedule can be found in *Section 2.4 Proposed Project Description*. Potential construction-related conflict with the circulation system would be temporary. Potential circulation-related impacts associated with pipeline construction would occur in segments as construction progresses along each segment of the pipeline alignment over the construction period, and disturbed areas would be restored to pre-construction condition. As discussed below under impact "b," project construction would not result in a considerable increase in vehicle trips or VMT. The City of Orange considers projects that generate less than 100 peak hour trips (and less than 51 peak hour trips at any one intersection) to have a less than significant level of service and/or a VMT impact (City of Orange 2020c). Project construction would require approximately 48 round-trip worker trips per day, and an average of 23 round-trip hauling trips per day, for a total of 70 trips per day, which would be distributed over a typical 8-hour workday (see **Appendix A**). Thus, the project would result in fewer than 100 peak hour trips and would not produce a significant VMT impact to roadways in the project area. Therefore, project construction would not conflict with transportation-related policies outlined in the City of Orange *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment*. Although the proposed project will not construct pipelines or maintenance holes within City of Villa Park jurisdiction, temporary sewer bypass pumping equipment around Meats Avenue and Santiago Boulevard would cross over into roadways within City of Villa Park jurisdiction. Similarly, although the proposed project will not construct pipelines or maintenance holes west of Glassell Street, traffic control signs would be placed in Glassell Street and cross over UPRR right-of-way.

Although construction of the proposed project within existing right-of-way may require temporary closures of vehicle lanes, bicycle lanes, alternative transportation, and sidewalks, potential impacts related to these closures would be minimized through the implementation of construction traffic measures. OC San's General Requirement (GR) 9 Public Convenience and Access requires the construction contractor to provide safe, adequate access for vehicles and pedestrians to businesses and residences adjacent to the worksite. GR-9 requires the construction contractor to submit for OC San's acceptance a Traffic Control plan stamped and signed by a Traffic Engineer registered in the State of California. GR-9 also requires the construction contractor to coordinate with applicable cities on traffic detour routes, street sweeping and collection and removal of garbage adjacent to the worksite.

Mitigation Measure TRA-1 requires the construction contractor to submit project plans and specifications to the City of Orange Public Works Department, City of Villa Park Public Works Department, Caltrans, Union Pacific Railroad, and Metrolink, and to implement construction traffic management measures for Closures of Transportation Facilities including bus stops. Implementation of **Mitigation Measure TRA-1** would ensure potential temporary impacts related to closures of pedestrian and bicycle access routes, and alternative transit facilities in City of Orange, City of Villa Park, Caltrans, Union Pacific Railroad, and Metrolink right-of-ways are less than significant.

In addition, bicycle lanes, sidewalks, and transit stops that would be temporarily impacted would be restored upon the completion of construction, as required by OC San General Requirement GR-42 Restoration of Surfaces.

Operation of the proposed project would not conflict with regional transportation plans or the City of Orange General Plan because below-ground pipelines would not have a permanent impact on circulation. Maintenance holes would be designed according to OC San standard specifications such that they would not impact circulation. Inspection of the pipelines and maintenance holes would be incorporated into OC San's existing O&M activities. The proposed project's impacts on the circulation system would therefore be less than significant.

Mitigation Measures

See Mitigation Measure TRA-1.

Significance Determination

Less than significant with mitigation incorporated.

b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

CEQA Guidelines Section 15064.3, subdivision (b) outlines criteria for analyzing transportation impacts in terms of VMT for land use projects and transportation projects. VMT refers to the amount and distance of automobile travel attributable to a project. According to the Office of Planning and Research *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR 2018), the term "automobile" refers to on-road passenger vehicles, specifically cars and light-duty trucks. In the case of the proposed project, worker trips would be conducted in cars and light-duty trucks. Vendor and hauling trips would be conducted in medium- or heavy-duty trucks and are therefore excluded from the estimation of VMT. Environmental impacts associated with the use of medium- and heavy-duty truck trips are addressed in the Air Quality, Energy, and Greenhouse Gas sections of this document.

Construction of the proposed project would involve temporary worker trips which would occur during the 24-month construction period. Project construction would require approximately 19 round-trip worker trips per day. According to OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA*, projects that generate fewer than 110 trips per day may be assumed to cause a less-than-significant transportation impact (OPR 2018). The City of Orange *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* also presumes that projects generating less than 110 trips per day have a less than significant impact. Therefore, construction of the project would not result in a considerable increase in VMT.

Operation of the proposed project is expected to require occasional worker trips for inspection and testing of the pipeline and maintenance holes. These trips would be incorporated into OC San's existing O&M

program and would not increase VMT in the project area. Based on OPR guidance, the proposed project would not create a significant impact related to VMT. The project would be consistent with CEQA Guidelines Section 15064.3, subdivision (b) and the impact would be less than significant.

Mitigation Measures

None required.

Significance Determination

Less than significant.

bc) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The project would not construct new roadways; existing roadways would be restored to their prior condition once construction is complete. Therefore, after construction, the project would not create roadway hazards.

Project construction would temporarily increase transportation hazards in the project area because it would require incompatible uses (i.e., use of heavy construction equipment) and ingress/egress to temporary staging areas from existing roadways. **Mitigation Measure TRA-1** requires preparation of a traffic control plan. The traffic control plan would include measures to ensure that vehicle ingress and egress from construction sites and the staging area(s) and use of heavy construction equipment in the project area occur safely. After construction is complete, all pipeline construction areas would be restored to pre-construction conditions; there would be no permanent change to roadway characteristics and uses. OC San's General Requirements require best management practices that would also be implemented during construction, such as covering trenches with plates during non-construction periods, which would further reduce project impacts. With adherence to Mitigation Measure TRA-1, the impacts from the proposed project would be less than significant.

Mitigation Measures

The following mitigation measure shall be incorporated into the project to reduce potential impacts to access and safety during construction. The following mitigation measure was identified in the FMP PEIR as Mitigation Measure TRA-1. The proposed project's traffic impacts would be less than significant with mitigation incorporated.

Mitigation Measure TRA-1: Coordination with Cities, Caltrans

Prior to initiation of construction activities, engineering drawings and specifications and/or contractor shop drawings shall be submitted for review and approval by the Orange County Sanitation District (OC San), to the Public Works Departments of Orange and Village Park, the California Department of Transportation (Caltrans), and Union Pacific Railroad and/or Metrolink (where applicable). The proposed project may impact local transportation facilities due to temporary street and/or lane closures, temporary transit stop relocations, haul truck circulation, and construction staging. These impacts, if any, will be identified in the engineering drawings and specifications and/or contractor shop drawings identified for individual projects. The following steps will be required to mitigate construction traffic impacts identified in the engineering drawings and specifications and/or contractor shop drawings:

Closures to Transportation Facilities

- A. Traffic control, and associated Traffic Control Plans, for any lane closure, detour, or other disruption to traffic circulation, including bicycle and pedestrian trails. Bicycle and pedestrian trails shall remain open, to the greatest extent possible, during construction or re-routed to ensure continued connectivity.
- B. Engineering drawings and specifications shall meet the standards established in the current California Manual on Uniform Traffic Control Device.
- C. Bus stop access impacts shall be coordinated with, and approved by, the Orange County Transportation Authority.
- D. Consistent with applicable City and/or Caltrans requirements, and at least three (3) business days before any construction activities that would affect travel on nearby roadways, the construction contractor shall notify the affected City Public Works Department and/or Caltrans of construction activities that could impede movement (such as lane closures) along roadways to allow for uninterrupted emergency access. Surrounding property owners shall also be notified of construction activities through the OC San Public Outreach Process.

Truck Haul Routes and Circulation

- E. As required by the applicable agency, construction vehicle haul routes for the delivery of construction materials (e.g., lumber, tiles, piping, windows) to the site, necessary traffic controls and detours, and a construction phasing plan for the construction activities shall be identified.
- F. The hours during which transport activities can occur and methods to mitigate construction-related impacts to adjacent streets shall be specified. Examples of these methods include: 1) transport of materials and heavy equipment to the site(s) shall be avoided during the AM and PM peak commute hours; 2) haul trucks shall utilize designated truck routes to the extent feasible; 3) advance warning signage and/or detour routes shall be provided along streets where construction activities would occur; and, 4) scheduling of construction activities and workers at each individual site so that less than 110 daily trips would occur.
- G. The contractor shall be required to keep all haul routes clean and free of debris, including gravel and dirt resulting from its operations. The contractor shall clean adjacent streets, as directed by the OC San, of any material that may have been spilled, tracked, or blown onto adjacent streets and areas.
- H. As required by the applicable agency, hauling and transport of oversize loads outside of their standard working hours will require approvals.
- I. Use of local streets shall be prohibited, except what is required to provide direct access to a construction site.
- J. Haul trucks entering or exiting public streets shall yield to public traffic at all times.

K. If hauling operations cause any damage to existing pavement, streets, curbs, and/or gutters along the haul route, the contractor shall be fully responsible for repairs. The repairs shall restore the damaged property to its original condition.

Construction Staging

L. Any off-site construction staging or material storage sites shall be identified to the extent feasible.

M. All project-related staging of vehicles shall be kept out of the adjacent public roadways and shall occur on site or within other off-street areas.

Significance Determination

Less than significant with mitigation.

d) Result in inadequate emergency access?

Construction of the proposed project may require lane closures along the pipeline alignment and would generate trips associated with construction (worker travel and delivery of materials and equipment). Lane closures have the potential to hinder access for emergency vehicles. Traffic control measures are included in **Mitigation Measure TRA-1**. Traffic control measures implemented during project construction would require that emergency crews be able to access sites and surrounding areas. The contractor would coordinate to ensure that emergency responders are informed of construction locations and construction does not interrupt emergency access. Traffic control measures would also require that the contractor make a reasonable effort to preserve access to business and properties during construction. OC San's General Requirements require best management practices to maintain emergency access, such as maintaining access to fire hydrants, maintaining safe pedestrian crossings, preserving unobstructed access to emergency service buildings (such as police stations, fire stations, and hospitals), and notifying emergency services prior to construction. OC San General Requirement GR-9 requires the construction contractor to maintain public safety, and unobstructed access to all fire hydrants, fire stations, police stations, hospitals, or other emergency services. GR-9 requires the contractor to coordinate with the local police and fire departments and public transit facilities, provide them with a copy of the accepted Traffic Control Plan, and to ensure that 24-hour emergency access is available. In addition, GR-9 requires the contractor to provide and maintain fences, barriers, directional signs, lights, and flagmen as are necessary to give adequate warning to the public at all times of any dangerous condition to be encountered as a result of the construction work and to give directions to the public as appropriate. These General Requirements would further reduce project impacts. Project impacts would be reduced to less than significant with the implementation of **Mitigation Measure TRA-1**.

Mitigation Measures

See Mitigation Measure TRA-1.

Significance Determination

Less than significant with mitigation.

3.18 Tribal Cultural Resources

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
Would the Project:				
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	[]	[X]	[]	[]
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	[]	[X]	[]	[]

Discussion

In November and December 2019, a cultural resources records search of the CHRIS was conducted at the South Central Coastal Information Center at the California State University, Fullerton to identify any previously recorded cultural resources and cultural resources studies in and within a 0.25-mile radius of the FMP area for a majority of the OC San service area. On January 13, 2020 a pedestrian field survey was conducted to identify cultural resources within the FMP area. *Section 3.5, Cultural Resources*, provides a summary of the search results. Only one significant archaeological site was identified as a historic resource within the FMP area, and it was not located within the proposed project area. The site, a large pre- contact

habitation located primarily on lands administered by a military installation, was not identified as a Tribal Cultural Resource (TCR) by any tribal entity consulted for the FMP PEIR. According to the PEIR (OC San 2020), no burials or other deposits are known to exist within the FMP area, which has been fully developed.

California Health and Safety Code Section 7050.5

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the county coroner has examined the remains (Section 7050.5[b]). PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the Native American Heritage Commission (NAHC) within 24 hours (Section 7050.5[c]). NAHC will notify the "most likely descendant." With the permission of the landowner, the most likely descendant may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the most likely descendant by NAHC. The most likely descendant may recommend means of treating or disposing of, with appropriate dignity, the human remains, and items associated with Native Americans.

California Public Resources Code, Section 5097.98

PRC Section 5097.98 addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the NAHC to resolve disputes regarding the disposition of such remains. It has been incorporated into Section 15064.5(e) of the CEQA Guidelines. The proposed project would be required to comply with PRC Section 5097.98 should any unknown human remains be discovered during site disturbance.

Assembly Bill (AB) 52 Consultation

AB 52 established a formal consultation process. AB 52 mandates that the lead agency must provide formal written notification to the designated contact of traditionally and culturally affiliated California Native American tribes that have previously requested notice. Native American tribes are notified early in the project review phase by written notification that includes a brief description of the proposed project, location, and the lead agency's contact information. The Tribal contact then has 30 days to request project-specific consultation pursuant to this section (Public Resources Code §21080.1).

As a part of the consultation pursuant to Public Resources Code §21080.3.1(b), both parties may suggest mitigation measures (Public Resources Code §21082.3) that can avoid or substantially lessen potential significant impacts to TCRs or provide alternatives that would avoid significant impacts to a TCR. The California Native American tribe may request consultation on mitigation measures, alternatives to the project, or significant effects. The consultation may also include discussion on the environmental review, the significance of TCRs, the significance of the project's impact on the TCRs, project alternatives, or the measures planned to preserve or mitigate impacts on resources. Consultation shall end when either: 1) both parties agree on the mitigation measures to avoid or mitigate significant effects on a TCR, or 2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.

Per AB 52, OC San initiated consultation with Native Tribes that are traditionally and culturally affiliated with the geographic area of the proposed project to identify resources of cultural or spiritual value to the tribe. On April 13, 2022, OC San sent consultation notification letters to Native American Tribes on the OC San Master List pursuant to the requirements of AB 52 pertaining to government-to government consultation. **Table 3-14** summarizes OC San's consultation efforts. To date, OC San has conducted consultation with one federally recognized Native American Tribe: The Gabrieleño Band of Mission Indians – Kizh Nation. OC San has also conducted consultation with the Juaneño Band of Mission Indians - Acjachement Nation-Belardes. An additional Native American Tribe was contacted but did not respond, as noted in **Table 3-14**.

Table 3-14: Native Tribal Consultation Summary

Tribe	Individual Contacted	Date Letter Mailed	Response Received	Consultation Held
Gabrieleño Band of Mission Indians – Kizh Nation	Andrew Salas	April 13, 2022	April 19, 2022	Letter sent June 12, 2023 and response received June 20, 2023
Juaneño Band of Mission Indians - Acjachement Nation-Belardes	Joyce Perry	April 13, 2022	May 17, 2022	July 7 and 19 2022
San Gabriel Band of Mission Indians	Anthony Morales	April 13, 2022	None	None

The Gabrieleño Band of Mission Indians – Kizh Nation sent a letter to OC San on April 19, 2022 which stated the proposed project is within its Ancestral Tribal Territory and requested consultation under AB 52. OC San responded, and after some correspondence, the Gabrieleño Band of Mission Indians – Kizh Nation provided OC San with information and language on May 27, 2022 for OC San to consider in its analysis of the proposed project's potential impacts on TCRs. The information and language have been kept confidential, but generally described the high degree of cultural sensitivity of the project area and the tribe's concerns with specific subsurface ground disturbance activities. The Gabrieleño Band of Mission Indians – Kizh Nation provided OC San with proposed mitigation measures to reduce the potential impacts of the project on TCRs. The tribe expressed specific concern about ground disturbance in areas that may contain "original" soils from the project area because original soils may contain TCRs. The tribe requested information regarding whether the soil that would be disturbed by the proposed project is original and never previously disturbed, original soil that has been excavated and then used as backfill, or soil of unknown origin which could potentially be original. In response, TCR mitigation measures were added to this Initial Study, including worker awareness training, development of a cultural resources monitoring plan, and consultation with the most likely descendant in the event of discovery of human remains, to reduce potential impacts on TCRs from ground-disturbing activities (see **Mitigation Measures TCR-1, TCR-2, and TCR-3**).

The Juaneño Band of Mission Indians - Acjachement Nation-Belardes responded to OC San's AB 52 notification letter via email to OC San on Tuesday May 17, 2022. The email stated that the proposed project is within the tribe's territory. The Juaneño Band of Mission Indians - Acjachement Nation-Belardes requested a copy of the CHRIS records search for the project area, which OC San provided on June 8. The tribe then requested the site records for any pre-contact resources associated with burials within the 0.25-mile buffer

and OC San provided an explanation that none of the previously-recorded sites with burials were within the 0.25-mile buffer of the proposed project. OC San also included an explanation that no previously recorded cultural resources were identified within 2 miles of the proposed project. Conference calls were held between OC San and the Juaneño Band of Mission Indians – Acjachement Nation-Belardes on July 7 and July 19 to discuss these issues. During the July 19 call, the Juaneño Band of Mission Indians – Acjachement Nation-Belardes indicated that no TCRs are present within one mile of the proposed project and the AB 52 consultation process could be concluded for the proposed Taft Sewer Improvement Project. The Juaneño Band of Mission Indians - Acjachement Nation-Belardes also asked to be consulted on future projects identified in the FMP PEIR.

Based on the cultural sensitivity of the area, TCRs may potentially be present within the project's proposed footprint. Therefore, the project may have the potential to affect TCRs during ground-disturbing activities, such as trenching.

a.i) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).

The cultural resources records search, aerial photo studies, and pedestrian field survey determined there are no known TCRs within the proposed project area. While the possibility of encountering intact subsurface TCRs is low, there is always the potential for ground disturbing activities to encounter previously unknown TCRs. **Mitigation Measures CUL-1, CUL-2,** and OC San General Requirement GR-6-Z (regarding procedures to be followed if human remains are uncovered), will be implemented, and Public Resources Code Section 5097.98 and California Health and Safety Code Section 7050.5 will be followed. As discussed in *Section 3.5 Cultural Resources*, **Mitigation Measure CUL-1** informs construction personnel of the types of resources that may be encountered and the proper procedures to implement in the event of an unanticipated discovery. **Mitigation Measure TCR-1** informs construction personnel on recognizing tribal cultural resources, and appropriate procedures to follow if tribal cultural resources, human remains or grave goods are encountered. **Mitigation Measure TCR-2** requires a plan with protocols for the discovery of resources that may qualify as tribal cultural resources, and a treatment plan for resource recovery. **Mitigation Measure CUL-2** will cease all ground disturbing activities until the resource can be assessed by a qualified archaeologist. OC San General Requirement 6-Z and Public Resources Code Section 5097.98 and California Health and Safety Code Section 7050.5 require construction be immediately halted, the County coroner be notified immediately if human remains are encountered, the Native American Heritage Commission (NAHC) be notified if the remains are found to be Native American, and NAHC guidelines be adhered to for treatment and disposition of the remains. **Mitigation Measure TCR-3** requires notification and coordination with the most likely descendant in the event human remains are discovered that may be of Native American origin.

With the implementation of **Mitigation Measures CUL-1, CUL-2,** OC SAN General Requirement 6-Z, adherence to California Public Resources Code Section 5097.98 and California Health and Safety Code Section 7050.5, and implementation of **Mitigation Measures TCR-1, TCR-2,** and **TCR-3,** there would be no substantial adverse changes to the significance of a TCR that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources.

Mitigation Measures:

The following mitigation measure shall be incorporated into the project to reduce potential impacts to unknown tribal cultural resources that could be uncovered during trenching and excavation. The following mitigation measures were not included in the FMP PEIR; they are new to the proposed project. The proposed project's potential tribal cultural resources impacts would be less than significant with mitigation incorporated.

TCR-1: Worker Environmental Awareness Program (WEAP): Prior to the start of ground-disturbing activities, OC San shall retain an archaeologist (Project Archaeologist) meeting the Secretary of the Interior's Professional Qualification Standards for archaeology (48 Federal Register 44716) to provide WEAP training that focuses on the inadvertent discovery of archaeological and tribal cultural resources. The WEAP training shall be provided to all construction personnel prior to the commencement of any ground-disturbing activities and shall include, at minimum, the following topics so construction personnel will understand their responsibilities:

1. What archaeological and tribal cultural resources are and why they are important
2. Review environmental laws that protect archaeological and tribal cultural resources, and the consequences of unauthorized collection of artifacts and other cultural material
3. Explain the protocol to be followed if an artifact or tribal/cultural resource feature is discovered during construction as identified in TCR-2; and
4. Explain the protocol to be followed if potential human remains or associated grave goods are encountered during construction as identified in TCR-2 and TCR-3.

Upon completion of the WEAP training, construction personnel will sign an acknowledgment that they attended the training, understand the training, and will comply with the protocols presented.

TCR-2: Develop and Implement a Cultural Resource Management Plan (CRMP). Prior to the start of ground-disturbing activities, OC San's Project Archaeologist shall develop a CRMP that includes protocols to be implemented for the potential scenarios that may arise with the discovery of unanticipated archaeological resources that may also qualify as tribal cultural resources. The CRMP shall follow the provisions of Section 15064.5(f) of the CEQA Guidelines. The CRMP shall also be consistent with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 Federal Register 44716-44740), the California Office of Historic Preservation's *Archaeological Resource Management Reports: Recommended Contents and Format* (1990), *Guidelines for Archaeological Research Designs* (1991), and *Guidelines for the Curation of Archaeological Collections* (1993), and the Advisory council on Historic Preservation's *Treatment of Archaeological Properties: A Handbook* (1980).

The CRMP shall meet the performance standards outlined above (and further identified below) to avoid, minimize, or mitigate impacts to unanticipated archaeological resources that may also qualify as tribal cultural resources:

1. *Discovery Response Protocols:* The CRMP shall identify a stop work radius in the event of a discovery, define resource protection measures to be followed such as delineation of an Environmentally Sensitive Area (ESA), and define a notification protocol to guide OC San's consultation with Tribes when resources are discovered.

2. *Monitoring Protocols:* The CRMP shall contain protocols for archaeological and tribal monitoring to be activated if sensitive resource areas are inadvertently discovered such as: Monitors will observe ground-disturbing work, coordinate with the OC San project lead/foreman if a work stoppage is required, and assist in the immediate implementation of the Discovery Response Protocols. The Monitoring Protocols shall include a description of roles and responsibilities and protocols for communication/notification in the event of a discovery.
3. *Evaluation and Treatment Protocols:* The CRMP shall contain procedures for archaeological evaluation of discoveries in accordance with the CRHR criteria (14 CCR 4852[b]) and for treatment of resources found to be significant in the event that avoidance or preservation in place are not possible. The CRMP shall include:
 - a. A research design that contains an explicit statement of theoretical and methodological approaches to be followed, pursuant to the Secretary of the Interior's Standards for Archaeological Documentation (48 Federal Register 44734–44737).
 - b. Specific field and laboratory methodologies appropriate for the environmental and cultural context of the area under study, as well as expected results and reasons for those expectations, pursuant to the Secretary of the Interior's Standards and Guidelines for Identification and Evaluation (48 FR 44720–44726).
 - c. A treatment plan for recovering and preserving scientifically consequential data from intact archaeological deposits identified during the testing and evaluation phase that are determined to be significant according to the criteria set forth in the research design, following the guidelines provided in the Advisory Council on Historic Preservation's *Treatment of Archaeological Properties: A Handbook* (1980). The treatment plan shall include provisions for determining the disposition or long-term curation of any archaeological materials that may be recovered during construction.
4. *Discovery Protocols for Human Remains and/or Funerary Objects, Sacred Objects, and Objects of Cultural Patrimony:* The CRMP shall identify procedures to be implemented in the event of a discovery of human remains and/or funerary objects, sacred objects, and objects of cultural patrimony, consistent with the requirements of mitigation measure TCR-3, including requirements for Tribal consultation regarding arrangements for reburial in a culturally appropriate location. The CRMP shall also contain procedures for Tribal consultation in case isolated objects of Tribal significance are encountered in disturbed stratigraphic contexts, to ensure appropriate treatment or disposition of the objects.

TCR-3: Discovery of Human Remains. In the event of an unanticipated discovery of human remains, in accordance with California Health and Safety Code Section 7050.5, the County Coroner shall be notified within 24 hours of the discovery. The project lead/foreman shall designate an Environmentally Sensitive Area (ESA) physical demarcation/barrier 100 feet around the resource and no further excavation or disturbance shall occur within the ESA until OC San, informed by the County Coroner of its decision, makes a determination regarding the disposition of the remains. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours. In accordance with Public Resources Code Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendant (MLD) from the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted access to the site. In consultation with the MLD, OC San will determine the disposition of the human remains. OC San shall notify the project lead/foreman when the ESA may be released again for construction.

Significance Determination:

Less than significant with mitigation incorporated.

a.ii) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

The project is located within Ancestral Tribal Territory of the Gabrieleno Band of Mission Indians – Kizh Nation. It is also located within the territory of the Juaneño Band of Mission Indians - Acjachement Nation-Belardes. During AB 52 consultation for the proposed project, the Gabrieleno Band of Mission Indians – Kizh Nation expressed concern that the proposed project has the potential to impact TCRs during ground disturbing activities in areas with original soil. The tribe suggested mitigation measures to lessen those potential impacts. **Mitigation Measure TCR-1** informs construction personnel on recognizing tribal cultural resources, and appropriate procedures to follow if tribal cultural resources, human remains or grave goods are encountered. **Mitigation Measure TCR-2** requires a plan with protocols for the discovery of resources that may qualify as tribal cultural resources, and a treatment plan for resource recovery. **Mitigation Measure TCR-3** requires notification and coordination with the most likely descendant in the event human remains are discovered that may be of Native American origin. .

In addition, the implementation of **Mitigation Measures CUL-1, CUL-2**, OC San General Requirements 6-Y and 6-Z, and adherence to California Public Resources Code Section 5097.98 and California Health and Safety Code Section 7050.5, will be required. With adherence to these measures, the impact to any previously unknown TCRs will be less than significant.

Mitigation Measures

Refer to **Mitigation Measures CUL-1** and **CUL-2** in *Section 3.5 Cultural Resources* and **Mitigation Measures TCR-1, TCR-2**, and **TCR-3** above.

Significance Determination:

Less than significant with mitigation incorporated.

3.19 Utilities and Service Systems

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
Would the Project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	[]	[]	[X]	[]
b) Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?	[]	[]	[]	[X]
c) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	[]	[]	[]	[X]
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	[]	[]	[X]	[]
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	[]	[]	[X]	[]

Discussion

Water Service

Municipal water service in the OC San service area, covering northern and central Orange County, is provided by municipalities and water districts who serve customers within their respective geographic boundaries. These entities supply a combination of groundwater from the Orange County Water Basin, and imported water delivered by the MWD to its member agencies. Within the OCWD boundaries approximately 60% to 70% of the water needs are met by groundwater, with the rest supplied by imported water from MWD (OC San 2020).

Water service in the project area is provided by the City of Orange Public Works Department, Water Division. The City of Orange obtains approximately 75 percent of its water from groundwater sources via 12 active wells with the Orange County Groundwater Basin, managed by the Orange County Water District. The City of Orange also relies on imported water from the Colorado River and Northern California from the MWD through the Municipal Water District of Orange County (City of Orange 2023a).

Wastewater Treatment

OC San is the sole wastewater treatment entity in its service area. Sewer collection upstream of OC San facilities is the responsibility of OC San's various member agencies, the cities, and special districts. These entities maintain a series of underground pipelines, typically located in roads, that convey wastewater from their customer collection points to OC San sewer mains (OC San 2020).

Stormwater Drainage

Stormwater collection and conveyance within the OC San service area is provided by the District's constituent cities and by Orange County Public Works within the unincorporated areas, with smaller local facilities draining into a larger regional system maintained by the Orange County Flood Control District. The local storm drain system in the project area consists of roadway gutters, inlets, basins, and small-diameter lateral pipes located in and adjacent to existing roads and connects to the larger downstream system which drains to the Santa Ana River and eventually to the Pacific Ocean.

Electrical, Natural Gas, and Telecommunications Utilities

Southern California Edison, a subsidiary of the publicly traded company Edison International, is the electrical power service provider in most of Orange County, including the entire OC San service area. Southern California Edison transmits electricity from generation plants to substations, and then distributes the electricity to its customers through an extensive series of underground conduits and overhead lines hung on a combination of wooden and steel poles. Underground conduit is typically located beneath public roadways, and overhead lines often follow road alignments (OC San 2020).

Southern California Gas Company, a subsidiary of the publicly traded company Sempra Energy, is the natural gas service provider in all of Orange County. Southern California Gas Company maintains a series of transmission and distribution pipelines throughout the OC San service area, mostly located beneath public streets (OC San 2020).

Telecommunications service in the OC San service area is variously provided by AT&T, Spectrum, and Cox Communications. These companies maintain cable networks throughout their service areas to carry signals

to their customers, including underground conduit located within public roadways, and overhead lines often collocated with electric wire (OC San 2020).

Landfills

Solid waste disposal in the OC San service area is currently handled at three landfills operated by Orange County Waste & Recycling (OCWR), a department of the County of Orange. These are the Frank R. Bowerman Landfill, in Irvine; the Olinda Alpha Landfill, in Brea; and the Prima Deshecha Landfill, in San Juan Capistrano (CalRecycle nd). The Olinda Alpha Landfill and the Prima Deshecha Landfill accept public and commercial waste, whereas the Frank R. Bowerman Landfill is available for commercial use only. All three landfills are permitted as Class III landfills, which accept only non-hazardous municipal solid waste for disposal; no hazardous or liquid waste are accepted. Landfill closure dates are presented in **Table 3-15**.

Table 3-15: OCWR Landfill Closure Dates

Landfill Name	Location	Date Opened	Ceased Operation Date	Remaining Capacity
Frank R. Bowerman	Irvine	1990	2053	205,000,000 cubic yards
Olinda Alpha	Brea	1960	2036	17,500,000 cubic yards
Prima Deshecha	San Juan Capistrano	1976	2102	134,300,000 cubic yards

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The project proposes to upgrade, replace, and rehabilitate aging sewer pipelines within the City of Orange, an urban, developed area of Orange County that is currently served by extensive service infrastructure. As a result of the extensive existing utility and public service infrastructure within the project area, the project alignment would run parallel to or intersect existing water transmission and delivery pipelines, stormwater drainage pipelines and channels, underground electrical conduit, underground natural gas pipelines, and underground telecommunications lines (Woodard & Curran 2022). This proximity of various entities' utility assets is a routine occurrence, and OC San's standard project planning process as part of engineering design will include identifying existing underground or overhead utilities occurring in the vicinity of the proposed project.

OC San will coordinate with Southern California Edison, Southern California Gas Company and the telecommunication companies to ensure facilities are adequately protected during construction. This coordination would also determine if temporary or permanent relocation of underground facilities is warranted, and establish agreements for mutually acceptable terms of the relocation. Temporary and permanent relocation of utilities such as small-diameter water pipelines and electrical conduit in an urban area such as City of Orange is a common component of infrastructure improvement projects, and the scale of any such relocation would be minor and would not have the potential to cause environmental impacts that would be considered significant under CEQA. In addition, OC San is required to comply with California Government Code Sections 4215—4216.24 and coordinate with the regional notification center to prevent unintended impacts on underlying pipelines and conduit. Mandatory coordination with the regional notification center would further avoid the potential for accidental breaches of utilities during construction.

Compliance with the referenced regulation during construction would ensure that the impact would be less than significant.

The project would not require or result in the construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities beyond the expansion of OC San's sanitary sewer system included in the proposed project. Construction of the project would occur within existing roadways which would be restored to pre-construction conditions, so no permanent change in stormwater drainage would occur. As discussed in *Section 3.14 Population and Housing*, the proposed project would serve existing and planned development that would occur with or without the project and would not induce unplanned population or employment growth that would require or result in the construction of new or expanded water, wastewater treatment, stormwater drainage, electrical power, natural gas, or telecommunications facilities. As explained in *Section 3.6 Energy*, operation of the proposed project would not involve the consumption of electricity. Therefore, the project would not result in the need to construct new electrical facilities. The environmental impacts of the proposed project's sewer transmission pipeline are evaluated throughout this IS/MND and are anticipated to all be mitigated to a less than significant level.

Mitigation Measures

None required.

Significance Determination

Less than significant.

b) Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?

The project proposes to upgrade, replace, and rehabilitate aging sewer pipelines within OC San's existing service area. Construction of the proposed project would require a minimal water supply for purposes such as dust control and concrete mixing. Existing sources would be sufficient and no new or expanded supply would be required for construction. Operation of the proposed project would not induce unplanned population growth that would require or result in the construction of new water treatment facilities or the expansion of existing facilities. No impact related to sufficient water supplies would occur.

Mitigation Measures

None required.

Significance Determination

No impact.

c) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

The proposed project would upgrade, replace, and rehabilitate aging sewer pipelines within the OC San service area. As discussed in *Section 3.14 Population and Housing*, the proposed project would serve existing and planned development that would occur with or without the proposed project and would not induce

unplanned population or employment growth that would require or result in the construction of new or expanded wastewater collection infrastructure or treatment services. Therefore, there would be no impact.

Mitigation Measures

None required.

Significance Determination

No impact.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Construction of the proposed project would generate solid waste in the form of construction and demolition debris that would need to be hauled off site and disposed of in a landfill by OC San's construction contractors. Construction and demolition material would include asphalt and concrete removed from paved areas and concrete, metal, and plastic pipe sections. While excavated soil would be reused onsite as backfill to the extent feasible, it is estimated that approximately 21,000 cy of material would need to be exported and disposed at a permitted landfill in accordance with local and state solid waste disposal requirements. The existing OCWR landfills noted in **Table 3-15** have remaining permitted capacity and would be available to accept non-hazardous demolition waste from the proposed project. However, OC San's contractor would be required to comply with OCWR's Construction and Demolition (C&D) Program and establish a plan for the diversion of at least 65 percent of this debris to approved C&D facilities that would reuse, recycle, or repurpose the material. If OCWR updates the C&D Program to adjust the required percentage or make other substantive changes in their requirements throughout the life of the project, the contractor would be responsible for complying with the C&D Program requirements at the time construction occurs. Compliance with this OCWR program would ensure that the project's impact with respect to generation of solid waste during the construction phase is less than significant.

Operation of the project is not anticipated to generate solid waste in the long-term. Therefore, solid waste generation would be limited to temporary construction activities and would not significantly affect available solid waste disposal capacity in the region. Therefore, impacts related to local infrastructure capacity would be less than significant.

Mitigation Measures

None required.

Significance Determination

Less than significant.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Construction and operation of the proposed project would comply with local, state, and federal regulations related to solid waste. While operation of the project is not anticipated to generate a long-term solid waste stream, construction activities would create debris such as excavated soil and demolished concrete, asphalt, metal, and plastic. Excavated soil would be backfilled to the extent possible, but OC San's construction

contractor would be required to dispose of excess construction debris in accordance with existing reduction statutes and regulations, such as OCWR's C&D Program, discussed in d) above, as well as Assembly Bill (AB) 939 and AB 341. These regulations would determine the landfill to be used for disposal of construction debris, mandatory 50 percent diversion of solid waste (AB 939), and mandatory recycling programs to reduce GHG emissions (AB 341). Therefore, impacts related to compliance with local, state, and federal reduction statutes and regulations related to solid waste would be less than significant.

Mitigation Measures

None required.

Significance Determination

Less than significant.

3.20 Wildfire

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	[]	[]	[]	[X]
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	[]	[]	[]	[X]
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	[]	[]	[]	[X]

-
- | | | | | |
|--|-----|-----|-----|-------|
| d) Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? | [] | [] | [] | [X] |
|--|-----|-----|-----|-------|

Discussion

The California Department of Forestry and Fire Protection's Fire Resources Assessment Program assesses the amount and extent of California's forests and rangelands, analyzes their conditions, and identifies alternative management and policy guidelines. Through the Fire Resources Assessment Program, CalFire produces maps designating very high fire hazard severity zones within SRAs and LRAs. The project vicinity is designated as a non-very high fire hazard severity zone in the City of Orange and City of Villa Park LRA maps (Cal Fire 2011a and 2011b).

As discussed in Section 3.9(f), the City of Orange has an emergency plan (EOP) which establishes emergency preparedness and emergency response procedures for both peacetime and wartime disasters. Additionally, the County of Orange and Orange County Fire Authority (OCFA) have a Local Hazard Mitigation Plan (LHMP) that includes key measures and activities to help protect residents, critical facilities, infrastructure, key resources, private property, and the environment from natural hazards in unincorporated areas, fire hazards in the Fire Authority service area, and County and Fire Authority owned facilities (Orange County 2021).

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

The project is not located in a VHFHZ. Construction activities would be located within existing City of Orange roadways. Potential staging areas would be located in vacant land and, if necessary, within roadway right-of-ways. Sidewalk and lane closures during construction would temporarily restrict access for use by emergency response vehicles or emergency evacuations and could impair implementation of or physically interfere with the City of Orange EOP or County/OCFA LHMP. Prior to initiation of construction activities, OC San would develop and implement a Traffic Control Plan to reduce impacts to emergency vehicle access potentially caused by lane closures that would take place during construction of the proposed project. Further consideration of the proposed construction activities and potential for roadway access and hazardous conditions can be found under *Section 3.17 Transportation*.

Operation of the proposed project would not physically impair or otherwise interfere with adopted emergency response or evacuation plans in the project area, as all disturbed ground surface would be returned to pre-construction conditions after excavation and below-grade pipeline installation. The project would not interfere with emergency evacuation plans. Operation would involve minimal truck trips for maintenance as needed. The proposed project would not have an impact on an adopted emergency response plan or emergency evacuation plan. There would be no impact.

Mitigation Measures

None required.

Significance Determination

Less than significant.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The project area and surrounding area is not located within very high, high, or moderate fire hazard severity zones (CalFire 2011a and 2011b). Staging areas would be located on vacant land and, if necessary, within the roadway right-of-ways. Pipelines would be installed below grade on parcels that do not have steep slopes. Therefore, the proposed project would not exacerbate wildfire risks or expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire. There would be no impact.

Mitigation Measures

None required.

Significance Determination

Less than significant.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The project area and surrounding area is not located within very high, high, or moderate fire hazard severity zones (CalFire 2011a and 2011b). The proposed project would not involve the installation or maintenance of infrastructure that is typically associated with fire risk, such as roads, fuel breaks, emergency water sources, or power lines. The project would rely on existing roads for access during construction and O&M. Installation of the sewer infrastructure would occur within the existing roadway rights of way. Once construction is complete, the project would not introduce people or structures to wildfire risk. There would be no impact.

Mitigation Measures

None required.

Significance Determination

Less than significant.

d) Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The proposed project would be located within existing City of Orange roadways. The potential construction staging areas would be located in vacant land and, if necessary, within roadway right-of-ways. Pipelines would be installed below-grade and overlying ground surface would be restored to pre-construction conditions, resulting in no permanent impact on site drainage. The project would have a less than significant impact related to stormwater runoff (see *Section 3.10 Hydrology and Water Quality*). No impact would occur.

Mitigation Measures

None required.

Significance Determination

No impact.

3.21 Mandatory Findings of Significance

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
Does the Project:				
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	[]	[X]	[]	[]
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a Project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	[]	[X]	[]	[]
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	[]	[X]	[]	[]

Discussion

a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the

number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

The proposed project would upgrade, replace, and rehabilitate aging sewer pipelines within OC San's wastewater collection and treatment system. The entirety of the proposed project alignment would be within existing roadway right-of-ways. With implementation of mitigation measures, the proposed project would not have the potential to substantially degrade the quality of the environment, reduce wildlife habitat, result in adverse impacts to wildlife populations or communities, or eliminate important examples of major periods of California history or prehistory.

The proposed project would result in emissions of criteria air pollutants from short-term construction activities. **Mitigation Measure AQ-1** would require the construction contractor to demonstrate that all 50-horsepower or greater diesel-powered equipment is powered with CARB-certified Tier 4 Final engines. Implementation of **Mitigation Measure AQ-1** reduces the cumulative emissions of criteria air pollutants, specifically NO_x emissions, that would contribute to regional air quality impacts during construction to less than significant.

As discussed in *Section 3.4 Biological Resources*, the proposed project site does not contain suitable habitat to support special status wildlife or plant species or sensitive plant or animal communities because of the disturbance history of the site, lack of suitable soils, inappropriate hydrologic conditions, or absence of appropriate vegetation communities. However, project construction has the potential to impact nesting birds, which are protected under the MBTA and CFGC. **Mitigation Measure BIO-1** would require a qualified biologist to conduct surveys for nesting birds and appropriate mitigation to be implemented to reduce potential direct and indirect impacts if construction activities must occur within the nesting season. **Mitigation Measure BIO-2** would require a permit or permission from the City of Orange be obtained prior to cutting or removing any tree, shrub, or plant, which serve as habitat to various species. With implementation of **Mitigation Measures BIO-1** and **BIO-2**, the project would not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of a rare or endangered plant or animal.

No paleontological resources are documented within the project area. However, the project area is located in an area of moderate paleontological sensitivity and there is potential for ground-disturbing pipeline replacement activities to uncover previously unrecorded paleontological resources. **Mitigation Measure CUL-1** would require cultural resources sensitivity training for all construction personnel to be held by a qualified archaeologist prior to the start of ground-disturbing activities. **Mitigation Measure CUL-2** would require that all ground disturbing work be temporarily suspended if cultural resources are discovered during construction and would ensure appropriate procedures for preservation are conducted. **Mitigation Measure GEO-1** would require development of a paleontological monitoring plan and preconstruction training prior to ground disturbing activities. With implementation of **Mitigation Measures CUL-1, CUL-2, and GEO-1**, the project would not have the potential to eliminate important examples of the major periods of California prehistory.

The project is located within Ancestral Tribal Territory of the Gabrieleno Band of Mission Indians – Kizh Nation. It is also located within the territory of the Juaneño Band of Mission Indians - Acjachement Nation-Belardes. The project has the potential to impact tribal cultural resources during ground disturbing activities in areas with original soil. **Mitigation Measure TCR-1** informs construction personnel on recognizing tribal

cultural resources, and appropriate procedures to follow if tribal cultural resources, human remains or grave goods are encountered. **Mitigation Measure TCR-2** requires a plan with protocols for the discovery of resources that may qualify as tribal cultural resources, and a treatment plan for resource recovery. **Mitigation Measure TCR-3** requires notification and coordination with the most likely descendant in the event human remains are discovered that may be of Native American origin. In addition, the implementation of **Mitigation Measures CUL-1, CUL-2, OC San General Requirements 6-Y and 6-Z, and adherence to California Public Resources Code Section 5097.98 and California Health and Safety Code Section 7050.5, will be required. With implementation of Mitigation Measures TCR-1, TCR-2, and TCR-3, the project would not have the potential to eliminate important examples of the major periods of California history.**

Mitigation Measures

See **Mitigation Measures AQ-1, BIO-1, BIO-2, CUL-1, CUL-2, GEO-1, TCR-1, TCR-2, TCR-3.**

Significance Determination

Less than significant with mitigation incorporated.

b) Have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a Project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

As described in Section 3.1 through Section 3.20, all resource topics associated with the proposed project have been analyzed in accordance with the CEQA and the State CEQA Guidelines and were found to pose no impact, less than significant impact, or less than significant impact with mitigation incorporated. No potentially significant impact would occur from project implementation. According to the CEQA Guidelines, 15065(a)(3), “cumulatively considerable” means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

According to CEQA Guidelines Section 15130(b) there are two approaches to discussing cumulative project impacts: the *List-of-Projects* method (a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency); or the *Summary-of-Projections* method (a summary of projections contained in an adopted general plan or related planning document or in a prior environmental document that has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency. OC San is relying on the *Summary-of-Projections* method for purposes of this analysis.

The Taft Branch Improvements Project (project number 2-49) was identified in OC San’s 2017 Waste Collection and Treatment FMP. An FMP is a long-term planning document that addresses the wastewater collection, treatment, recycling, and ocean outfall facility needs for OC San over a defined planning period. The major goals of the FMP were to identify a phased 20-year program of capital improvement projects that maintain reliability and accommodate future growth, as well as meet future regulatory requirements, level of service goals, and strategic initiatives. A total of 84 projects were identified in the 2017 FMP (OC San 2017). Cumulative impacts for each of the Appendix G Environmental Topics were analyzed and

included in the Draft PEIR Table 1-1 Summary of FMP Impacts. Impacts were found to be no impact, less than significant, or less than significant with mitigation incorporated.

The proposed project would not have impacts that are individually limited, but cumulatively considerable. The impacts of the project have been analyzed individually in this MND and cumulatively in the PEIR in accordance with the CEQA Guidelines; each topic has been found to have either no impact, a less than significant impact, or a less than significant impact with mitigation incorporated. The project is of a limited scale, and, taken in sum with other projects in the area, would not produce cumulatively considerable impacts to the environment or human beings. Therefore, cumulative impacts of the proposed project would be less than significant.

Mitigation Measures

See **Mitigation Measures AES-1, AQ-1, BIO-1, CUL-1, CUL-2, GEO-1, HAZ-1, HAZ-2, HAZ-3, NOI-1, NOI-2, TRA-1, TCR-1, TCR-2, TCR-3.**

Significance Determination

Less than significant.

c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

With implementation of mitigation measures, the proposed project would not have the potential to cause substantial adverse effects on human beings.

Lighting produced during nighttime construction activities has the potential to affect nighttime views at the surrounding properties. Implementation of **Mitigation Measure AES-1** would require a Construction Safety Lighting Plan and would reduce impacts to less than significant.

The project may expose the community, including sensitive receptors, to noise from construction. Implementation of **Mitigation Measures NOI-1, NOI-2** and **NOI-3** would require noise reduction measures and would reduce impacts to less than significant.

Although all existing applicable regulations would be followed, there is potential for hazardous materials associated with typical construction activities to be released during construction. Implementation of **Mitigation Measures HAZ-1** (Pre-Demolition Hazardous Buildings Material Survey and Abatement), **HAZ-2** (Hazardous Material Contingency Plan), and **HAZ-3** (Monitoring Well Protection) would minimize the risk of hazardous material exposure through material use and accidents and reduce impacts to less than significant.

Construction impacts would be temporary and have a limited footprint but would require temporary closures of roadways, bicycle lanes, and sidewalks. Potential impacts related to these closures would be minimized through the implementation of a Traffic Control Plan and Detour Plan, as described in **Mitigation Measure TRA-1**, which would ensure that appropriate traffic controls are implemented. Implementation of **Mitigation Measure TRA-1** would reduce impacts to less than significant.

The impacts of the proposed project have been analyzed in accordance with the CEQA Guidelines; each topic has been found to have either no impact, a less than significant impact, or a less than significant

impact with mitigation incorporated. Therefore, with the implementation of the mitigation measures noted above, the project would not result in any environmental effects that would cause substantial adverse effects on human beings either directly or indirectly.

Mitigation Measures

See **Mitigation Measures AES-2, NOI-1, NOI-2, NOI-3, HAZ-1, HAZ-2, HAZ-3, and TRA-1.**

Significance Determination

Less than significant with mitigation incorporated.

4. REPORT PREPARATION

4.1 Report Authors

This report was prepared by OC San, Woodard & Curran, and teaming partners. Staff from these agencies and companies that were involved include:

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APPENDIX A: CALEEMOD OUTPUT

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Taft Sewer Rehab
Construction Start Date	1/3/2024
Operational Year	2025
Lead Agency	Orange County Sanitation District
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.8
Precipitation (days)	2.2
Location	33.81776879539578, -117.83134946317298
County	Orange
City	Orange
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5738
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.13

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building A	Landscape	Special Lar	Population	Description
Other Asphalt Surfaces	59	1000sqft	1.35	0	0	0		

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Un/Mit.	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Unmit.	4.28	3.5	27.4	30.2	0.08	1.03	0.99	2.02	0.95	0.25	1.2		9160	9160	0.42	0.33	5.8	9275
Mit.	1.43	1.22	11.6	41.9	0.08	0.25	0.99	1.24	0.24	0.25	0.49		9160	9160	0.42	0.33	5.8	9275
% Reduced	66.6	65.1	57.5	-38.8				38.7	74.9		59.2							
Daily, Winter (Max)																		
Unmit.	4.71	3.86	31.7	37	0.09	1.19	0.99	2.18	1.09	0.25	1.35		10276	10276	0.46	0.34	0.15	10389
Mit.	1.86	1.58	16	48.7	0.09	0.41	0.99	1.4	0.38	0.25	0.64		10276	10276	0.46	0.34	0.15	10389
% Reduced	60.5	59	49.6	-31.6				35.9	64.9		52.8							
Average Daily (Max)																		
Unmit.	2.45	2	15.5	18.1	0.05	0.55	0.59	1.14	0.51	0.15	0.66		5515	5515	0.25	0.2	1.42	5581
Mit.	0.87	0.75	7.24	25.3	0.05	0.16	0.59	0.75	0.15	0.15	0.3		5515	5515	0.25	0.2	1.42	5581
% Reduced	64.5	62.8	53.2	-39.5				34.6	69.9		54.4							
Annual (Max)																		
Unmit.	0.45	0.37	2.83	3.31	0.01	0.1	0.11	0.21	0.09	0.03	0.12		913	913	0.04	0.03	0.24	924
Mit.	0.16	0.14	1.32	4.61	0.01	0.03	0.11	0.14	0.03	0.03	0.05		913	913	0.04	0.03	0.24	924
% Reduced	64.5	62.8	53.2	-39.5				34.6	69.9		54.4							
Exceeds (Daily Max)																		
Threshold		75	100	550	150			150			55							
Unmit.	No	No	No	No	No		No			No								

Mit.	No	No	No	No	No	No	No											
Exceeds (Average Daily)																		
Threshold	75	100	550	150	150	55												
Unmit.	No	No	No	No	No	No												
Mit.	No	No	No	No	No	No												
2.2. Construction Emissions by Year, Unmitigated																		
Year	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily - Summer (Max)																		
2024	4.28	3.5	27.4	30.2	0.08	1.03	0.99	2.02	0.95	0.25	1.2		9160	9160	0.42	0.33	5.8	9275
2025	4.06	3.33	25.4	29.7	0.08	0.91	0.99	1.9	0.84	0.25	1.09		9127	9127	0.42	0.33	5.53	9241
Daily - Winter (Max)																		
2024	4.71	3.86	31.7	37	0.09	1.19	0.99	2.18	1.09	0.25	1.35		10276	10276	0.46	0.34	0.15	10389
2025	4.43	3.63	29.3	36.5	0.09	1.02	0.99	2.01	0.94	0.25	1.19		10246	10246	0.46	0.34	0.14	10358
Average Daily																		
2024	2.19	1.8	14.5	16.6	0.04	0.55	0.48	1.03	0.5	0.12	0.62		4746	4746	0.21	0.16	1.21	4800
2025	2.45	2	15.5	18.1	0.05	0.55	0.59	1.14	0.51	0.15	0.66		5515	5515	0.25	0.2	1.42	5581
Annual																		
2024	0.4	0.33	2.65	3.04	0.01	0.1	0.09	0.19	0.09	0.02	0.11		786	786	0.04	0.03	0.2	795
2025	0.45	0.37	2.83	3.31	0.01	0.1	0.11	0.21	0.09	0.03	0.12		913	913	0.04	0.03	0.24	924
2.3. Construction Emissions by Year, Mitigated																		
Year	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily - Summer (Max)																		
2024	1.43	1.22	11.6	41.9	0.08	0.25	0.99	1.24	0.24	0.25	0.49		9160	9160	0.42	0.33	5.8	9275
2025	1.41	1.21	11.5	41.7	0.08	0.24	0.99	1.24	0.24	0.25	0.49		9127	9127	0.42	0.33	5.53	9241
Daily - Winter (Max)																		
2024	1.86	1.58	16	48.7	0.09	0.41	0.99	1.4	0.38	0.25	0.64		10276	10276	0.46	0.34	0.15	10389
2025	1.78	1.52	15.4	48.5	0.09	0.36	0.99	1.35	0.34	0.25	0.59		10246	10246	0.46	0.34	0.14	10358
Average Daily																		
2024	0.8	0.68	6.74	22.3	0.04	0.16	0.48	0.64	0.15	0.12	0.27		4746	4746	0.21	0.16	1.21	4800
2025	0.87	0.75	7.24	25.3	0.05	0.16	0.59	0.75	0.15	0.15	0.3		5515	5515	0.25	0.2	1.42	5581
Annual																		
2024	0.15	0.12	1.23	4.07	0.01	0.03	0.09	0.12	0.03	0.02	0.05		786	786	0.04	0.03	0.2	795
2025	0.16	0.14	1.32	4.61	0.01	0.03	0.11	0.14	0.03	0.03	0.05		913	913	0.04	0.03	0.24	924
2.4. Operations Emissions Compared Against Thresholds																		
Un/Mit.	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Unmit.	0 < 0.005			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Daily, Winter (Max)																		
Unmit.	0 < 0.005			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Daily (Max)																		
Unmit.	0 < 0.005			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual (Max)																		
Unmit.	0 < 0.005			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exceeds (Daily Max)																		
Threshold		55	55	550	150			150			55							3000
Unmit.	No	No	No	No				No			No							No
Exceeds (Average Daily)																		
Threshold		55	55	550	150			150			55							3000
Unmit.	No	No	No	No				No			No							No

2.5. Operations Emissions by Sector, Unmitigated

Sector	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Mobile	0	0		0	0	0	0	0	0	0	0			0	0	0	0	0
Area	< 0.005																	
Energy	0	0		0	0	0		0	0		0			0	0	0	0	0
Water													0	0	0	0	0	0
Waste													0	0	0	0	0	0
Total	0 < 0.005			0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Mobile	0	0		0	0	0	0	0	0	0	0			0	0	0	0	0
Area	< 0.005																	
Energy	0	0		0	0	0		0	0		0			0	0	0	0	0
Water													0	0	0	0	0	0
Waste													0	0	0	0	0	0
Total	0 < 0.005			0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Mobile	0	0		0	0	0	0	0	0	0	0			0	0	0	0	0
Area	< 0.005																	
Energy	0	0		0	0	0		0	0		0			0	0	0	0	0
Water													0	0	0	0	0	0
Waste													0	0	0	0	0	0
Total	0 < 0.005			0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Mobile	0	0		0	0	0	0	0	0	0	0			0	0	0	0	0
Area	< 0.005																	
Energy	0	0		0	0	0		0	0		0			0	0	0	0	0
Water													0	0	0	0	0	0
Waste													0	0	0	0	0	0
Total	0 < 0.005			0	0	0	0	0	0	0	0		0	0	0	0	0	0

2.6. Operations Emissions by Sector, Mitigated

Sector	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Mobile	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Area	< 0.005																	
Energy	0	0	0	0	0	0		0	0		0		0	0	0	0		0
Water												0	0	0	0	0		0
Waste												0	0	0	0	0		0
Total	0 < 0.005			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Daily, Winter (Max)																		
Mobile	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Area	< 0.005																	
Energy	0	0	0	0	0	0		0	0		0		0	0	0	0		0
Water												0	0	0	0	0		0
Waste												0	0	0	0	0		0
Total	0 < 0.005			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Daily																		
Mobile	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Area	< 0.005																	
Energy	0	0	0	0	0	0		0	0		0		0	0	0	0		0

[illegible]

3.2. Site Preparation (2024) - Mitigated

Daily, Summer (Max)																
Off-Road Equipment	0.03	0.03	0.14	2.03 < 0.005	0.01		0.01	0.01		0.01		290	290	0.01 < 0.005		291
Dust From Material Movement							0	0		0	0					
Onsite truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Daily, Winter (Max)																
Off-Road Equipment	0.03	0.03	0.14	2.03 < 0.005	0.01		0.01	0.01		0.01		290	290	0.01 < 0.005		291
Dust From Material Movement							0	0		0	0					
Onsite truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Daily																
Off-Road Equipment	0.01	0.01	0.03	0.47 < 0.005	< 0.005		< 0.005	< 0.005		< 0.005		67.6	67.6 < 0.005	< 0.005		67.9
Dust From Material Movement							0	0		0	0					
Onsite truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual																
Off-Road Equipment	< 0.005	< 0.005	0.01	0.09 < 0.005	< 0.005		< 0.005	< 0.005		< 0.005		11.2	11.2 < 0.005	< 0.005		11.2
Dust From Material Movement							0	0		0	0					
Onsite truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Offsite																
Daily, Summer (Max)																
Worker	0.01	0.01	0.01	0.15	0	0	0.03	0.03	0	0.01	0.01	33.9	33.9 < 0.005	< 0.005	0.14	34.4
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Daily, Winter (Max)																
Worker	0.01	0.01	0.01	0.13	0	0	0.03	0.03	0	0.01	0.01	32.2	32.2 < 0.005	< 0.005	< 0.005	32.6
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Daily																
Worker	< 0.005	< 0.005	< 0.005	0.03	0	0	0.01	0.01	0 < 0.005	< 0.005		7.61	7.61 < 0.005	< 0.005	0.01	7.71
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual																
Worker	< 0.005	< 0.005	< 0.005	0.01	0	0 < 0.005	< 0.005		0 < 0.005	< 0.005		1.26	1.26 < 0.005	< 0.005	< 0.005	1.28
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

3.3. Grading (2024) - Unmitigated

Location	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Onsite																		
Daily, Summer (Max)																		
Off-Road Equipment	2.84	2.38	18.3	18.5	0.06	0.68		0.68	0.63		0.63		5816	5816	0.24	0.05		5836
Dust From Material Movement							< 0.005	< 0.005		< 0.005	< 0.005							
Onsite truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Daily, Winter (Max)																		
Off-Road Equipment	2.84	2.38	18.3	18.5	0.06	0.68		0.68	0.63		0.63		5816	5816	0.24	0.05		5836
Dust From Material Movement							< 0.005	< 0.005		< 0.005	< 0.005							
Onsite truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Daily																		
Off-Road Equipment	1.36	1.14	8.79	8.87	0.03	0.33		0.33	0.3		0.3		2788	2788	0.11	0.02		2798
Dust From Material Movement							< 0.005	< 0.005		< 0.005	< 0.005							
Onsite truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual																		
Off-Road Equipment	0.25	0.21	1.6	1.62 < 0.005		0.06		0.06	0.06		0.06		462	462	0.02 < 0.005			463
Dust From Material Movement							< 0.005	< 0.005		< 0.005	< 0.005							

Worker	0.01	0.01	0.01	0.13	0	0	0.03	0.03	0	0.01	0.01	28.5	28.5	< 0.005	< 0.005	0.05	28.9
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hauling	0.01	< 0.005	0.18	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	125	125	0.01	0.02	0.11	132

3.5. Grading (2025) - Unmitigated

Location	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Onsite																		
Daily, Summer (Max)																		
Off-Road Equipment	2.73	2.29	16.7	18.3	0.06	0.6		0.6	0.55		0.55		5822	5822	0.24	0.05		5842
Dust From Material Movement						< 0.005	< 0.005		< 0.005	< 0.005								
Onsite truck	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Off-Road Equipment	2.73	2.29	16.7	18.3	0.06	0.6		0.6	0.55		0.55		5822	5822	0.24	0.05		5842
Dust From Material Movement						< 0.005	< 0.005		< 0.005	< 0.005								
Onsite truck	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road Equipment	1.62	1.36	9.93	10.9	0.03	0.36		0.36	0.33		0.33		3464	3464	0.14	0.03		3476
Dust From Material Movement						< 0.005	< 0.005		< 0.005	< 0.005								
Onsite truck	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road Equipment	0.3	0.25	1.81	1.99	0.01	0.07		0.07	0.06		0.06		573	573	0.02	< 0.005		575
Dust From Material Movement						< 0.005	< 0.005		< 0.005	< 0.005								
Onsite truck	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Offsite																		
Daily, Summer (Max)																		
Worker	0.11	0.1	0.1	1.54	0	0	0.36	0.36	0	0.08	0.08		365	365	< 0.005	0.01	1.38	370
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.15	0.03	1.89	0.83	0.01	0.02	0.4	0.42	0.02	0.11	0.13		1553	1553	0.13	0.25	3.27	1634
Daily, Winter (Max)																		
Worker	0.11	0.1	0.11	1.33	0	0	0.36	0.36	0	0.08	0.08		347	347	< 0.005	0.01	0.04	351
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.15	0.03	1.96	0.84	0.01	0.02	0.4	0.42	0.02	0.11	0.13		1553	1553	0.13	0.25	0.08	1631
Average Daily																		
Worker	0.06	0.06	0.06	0.83	0	0	0.21	0.21	0	0.05	0.05		209	209	< 0.005	0.01	0.35	212
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.09	0.02	1.18	0.5	0.01	0.01	0.24	0.25	0.01	0.07	0.08		924	924	0.07	0.15	0.84	971
Annual																		
Worker	0.01	0.01	0.01	0.15	0	0	0.04	0.04	0	0.01	0.01		34.7	34.7	< 0.005	< 0.005	0.06	35.1
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.02	< 0.005	0.21	0.09	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01		153	153	0.01	0.02	0.14	161

3.6. Grading (2025) - Mitigated

Location	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Onsite																		
Daily, Summer (Max)																		
Off-Road Equipment	0.79	0.75	5.85	30.5	0.06	0.16		0.16	0.16		0.16		5822	5822	0.24	0.05		5842
Dust From Material Movement						< 0.005	< 0.005		< 0.005	< 0.005								
Onsite truck	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Off-Road Equipment	0.79	0.75	5.85	30.5	0.06	0.16		0.16	0.16		0.16		5822	5822	0.24	0.05		5842
Dust From Material Movement						< 0.005	< 0.005		< 0.005	< 0.005								
Onsite truck	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

Annual																		
Worker	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.8. Building Construction (2024) - Mitigated

Location	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Onsite																		
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road Equipment	0.43	0.36		4.29	7.2	0.01	0.16		0.16	0.15		0.15		1145	1145	0.05	0.01	1149
Architectural Coatings		0																
Onsite truck	0	0		0	0	0	0	0	0	0	0	0		0	0	0	0	0
Average Daily																		
Off-Road Equipment	0.11	0.09		1.08	1.81 < 0.005		0.04		0.04	0.04		0.04		289	289	0.01 < 0.005		290
Architectural Coatings		0																
Onsite truck	0	0		0	0	0	0	0	0	0	0	0		0	0	0	0	0
Annual																		
Off-Road Equipment	0.02	0.02		0.2	0.33 < 0.005		0.01		0.01	0.01		0.01		47.8	47.8 < 0.005	< 0.005		47.9
Architectural Coatings		0																
Onsite truck	0	0		0	0	0	0	0	0	0	0	0		0	0	0	0	0
Offsite																		
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Worker	0	0		0	0	0	0	0	0	0	0	0		0	0	0	0	0
Vendor	0	0		0	0	0	0	0	0	0	0	0		0	0	0	0	0
Hauling	0	0		0	0	0	0	0	0	0	0	0		0	0	0	0	0
Average Daily																		
Worker	0	0		0	0	0	0	0	0	0	0	0		0	0	0	0	0
Vendor	0	0		0	0	0	0	0	0	0	0	0		0	0	0	0	0
Hauling	0	0		0	0	0	0	0	0	0	0	0		0	0	0	0	0
Annual																		
Worker	0	0		0	0	0	0	0	0	0	0	0		0	0	0	0	0
Vendor	0	0		0	0	0	0	0	0	0	0	0		0	0	0	0	0
Hauling	0	0		0	0	0	0	0	0	0	0	0		0	0	0	0	0

3.9. Building Construction (2025) - Unmitigated

Location	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Onsite																		
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road Equipment	0.37	0.31		3.83	7.13	0.01	0.11		0.11	0.1		0.1		1147	1147	0.05	0.01	1151
Architectural Coatings		0																
Onsite truck	0	0		0	0	0	0	0	0	0	0	0		0	0	0	0	0
Average Daily																		
Off-Road Equipment	0.03	0.03		0.33	0.61 < 0.005		0.01		0.01	0.01		0.01		97.5	97.5 < 0.005	< 0.005		97.8
Architectural Coatings		0																
Onsite truck	0	0		0	0	0	0	0	0	0	0	0		0	0	0	0	0
Annual																		
Off-Road Equipment	0.01 < 0.005			0.06	0.11 < 0.005	< 0.005		< 0.005	< 0.005		< 0.005		16.1	16.1 < 0.005	< 0.005			16.2
Architectural Coatings		0																
Onsite truck	0	0		0	0	0	0	0	0	0	0	0		0	0	0	0	0

Daily, Winter (Max)

3.10. Building Construction (2025) - Mitigated

3.11. Paving (2024) - Unmitigated

[illegible]

3.14. Paving (2025) - Mitigated

Location	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Onsite																		
Daily, Summer (Max)																		
Off-Road Equipment	0.29	0.26	3.61	7.87	0.01	0.06		0.06	0.06		0.06		1155	1155	0.05	0.01		1159
Paving		0.01																
Onsite truck	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Off-Road Equipment	0.29	0.26	3.61	7.87	0.01	0.06		0.06	0.06		0.06		1155	1155	0.05	0.01		1159
Paving		0.01																
Onsite truck	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road Equipment	0.17	0.16	2.15	4.68	0.01	0.04		0.04	0.04		0.04		687	687	0.03	0.01		689
Paving		0.01																
Onsite truck	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road Equipment	0.03	0.03	0.39	0.85	< 0.005	0.01		0.01	0.01		0.01		114	114	< 0.005	< 0.005		114
Paving		< 0.005																
Onsite truck	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Offsite																		
Daily, Summer (Max)																		
Worker	0.07	0.06	0.06	0.98	0	0	0.23	0.23	0	0.05	0.05		232	232	< 0.005	0.01	0.88	236
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Worker	0.07	0.06	0.07	0.85	0	0	0.23	0.23	0	0.05	0.05		221	221	< 0.005	0.01	0.02	224
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Worker	0.04	0.04	0.04	0.53	0	0	0.14	0.14	0	0.03	0.03		133	133	< 0.005	< 0.005	0.23	135
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Worker	0.01	0.01	0.01	0.1	0	0	0.02	0.02	0	0.01	0.01		22.1	22.1	< 0.005	< 0.005	0.04	22.4
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Land Use	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Other Asphalt Surfaces	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Other Asphalt Surfaces	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Other Asphalt Surfaces	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

Land Use	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Other Asphalt Surfaces	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Other Asphalt Surfaces	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Other Asphalt Surfaces	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

4.2.1. Electricity Emissions By Land Use - Unmitigated																		
Land Use	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Other Asphalt Surfaces														0	0	0	0	0
Total														0	0	0	0	0
Daily, Winter (Max)																		
Other Asphalt Surfaces														0	0	0	0	0
Total														0	0	0	0	0
Annual																		
Other Asphalt Surfaces														0	0	0	0	0
Total														0	0	0	0	0

Land Use	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Other Asphalt Surfaces														0	0	0	0	0
Total														0	0	0	0	0
Daily, Winter (Max)																		
Other Asphalt Surfaces														0	0	0	0	0
Total														0	0	0	0	0
Annual																		
Other Asphalt Surfaces														0	0	0	0	0
Total														0	0	0	0	0

Land Use	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Other Asphalt Surfaces	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Other Asphalt Surfaces	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Other Asphalt Surfaces	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

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Other Asphalt Surfaces	0	0	0	0	0	0		0	0		0	0	0	0	0	0	0
Total	0	0	0	0	0	0		0	0		0	0	0	0	0	0	0
Daily, Winter (Max)																	
Other Asphalt Surfaces	0	0	0	0	0	0		0	0		0	0	0	0	0	0	0
Total	0	0	0	0	0	0		0	0		0	0	0	0	0	0	0
Annual																	
Other Asphalt Surfaces	0	0	0	0	0	0		0	0		0	0	0	0	0	0	0
Total	0	0	0	0	0	0		0	0		0	0	0	0	0	0	0

4.3. Area Emissions by Source

4.3.2. Unmitigated

Source	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Consumer Products		< 0.005																
Architectural Coatings			0															
Total		< 0.005																
Daily, Winter (Max)																		
Consumer Products		< 0.005																
Architectural Coatings			0															
Total		< 0.005																
Annual																		
Consumer Products		< 0.005																
Architectural Coatings			0															
Total		< 0.005																

4.3.1. Mitigated

Source	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Consumer Products		< 0.005																
Architectural Coatings			0															
Total		< 0.005																
Daily, Winter (Max)																		
Consumer Products		< 0.005																
Architectural Coatings			0															
Total		< 0.005																
Annual																		
Consumer Products		< 0.005																
Architectural Coatings			0															
Total		< 0.005																

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Land Use	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Other Asphalt Surfaces													0	0	0	0	0	0
Total													0	0	0	0	0	0
Daily, Winter (Max)																		
Other Asphalt Surfaces													0	0	0	0	0	0
Total													0	0	0	0	0	0
Annual																		
Other Asphalt Surfaces													0	0	0	0	0	0
Total													0	0	0	0	0	0

4.4.1. Mitigated																		
Land Use	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Other Asphalt Surfaces													0	0	0	0	0	0
Total													0	0	0	0	0	0
Daily, Winter (Max)																		
Other Asphalt Surfaces													0	0	0	0	0	0
Total													0	0	0	0	0	0
Annual																		
Other Asphalt Surfaces													0	0	0	0	0	0
Total													0	0	0	0	0	0
4.5. Waste Emissions by Land Use																		
4.5.2. Unmitigated																		
Land Use	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Other Asphalt Surfaces													0	0	0	0	0	0
Total													0	0	0	0	0	0
Daily, Winter (Max)																		
Other Asphalt Surfaces													0	0	0	0	0	0
Total													0	0	0	0	0	0
Annual																		
Other Asphalt Surfaces													0	0	0	0	0	0
Total													0	0	0	0	0	0
4.5.1. Mitigated																		
Land Use	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Other Asphalt Surfaces													0	0	0	0	0	0
Total													0	0	0	0	0	0
Daily, Winter (Max)																		
Other Asphalt Surfaces													0	0	0	0	0	0
Total													0	0	0	0	0	0
Annual																		
Other Asphalt Surfaces													0	0	0	0	0	0
Total													0	0	0	0	0	0
4.6. Refrigerant Emissions by Land Use																		
4.6.1. Unmitigated																		
Land Use	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Total																		
Daily, Winter (Max)																		
Total																		
Annual																		
Total																		
4.6.2. Mitigated																		
Land Use	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Total																		

Daily, Winter (Max)
Total
Annual
Total

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Equipment Type	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
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Daily, Summer (Max)

Total

Daily, Winter (Max)

Total

Annual

Total

4.7.2. Mitigated

Equipment Type	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
----------------	-----	-----	-----	----	-----------------	-------	-------	-------	--------	--------	--------	------------------	-------------------	-------------------	-----------------	------------------	---	-------------------

Daily, Summer (Max)

Total

Daily, Winter (Max)

Total

Annual

Total

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Equipment Type	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
----------------	-----	-----	-----	----	-----------------	-------	-------	-------	--------	--------	--------	------------------	-------------------	-------------------	-----------------	------------------	---	-------------------

Daily, Summer (Max)

Total

Daily, Winter (Max)

Total

Annual

Total

4.8.2. Mitigated

Equipment Type	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
----------------	-----	-----	-----	----	-----------------	-------	-------	-------	--------	--------	--------	------------------	-------------------	-------------------	-----------------	------------------	---	-------------------

Daily, Summer (Max)

Total

Daily, Winter (Max)

Total

Annual

Total

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Equipment Type	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
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Daily,

Total

Daily,

Total

Annual:

Total

[illegible][illegible][illegible][illegible]

Avoided
Subtotal
Sequestered
Subtotal
Removed
Subtotal

Avoided	
Subtotal	
Sequestered	
Subtotal	

Removed
Subtotal

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated																		
Vegetation	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Total																		
Daily, Winter (Max)																		
Total																		
Annual																		
Total																		

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated																		
Land Use	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Total																		
Daily, Winter (Max)																		
Total																		
Annual																		
Total																		

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated																		
Species	TOG	ROG	NOx	CO	SO ₂	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO ₂	NBCO ₂	CO ₂ T	CH ₄	N ₂ O	R	CO ₂ e
Daily, Summer (Max)																		
Avoided																		
Subtotal																		
Sequestered																		
Subtotal																		
Removed																		
Subtotal																		

Daily, Winter (Max)
Avoided
Subtotal
Sequestered
Subtotal
Removed
Subtotal

Annual
Avoided
Subtotal
Sequestered
Subtotal
Removed
Subtotal

5. Activity Data

5.1. Construction Schedule				
Phase Name	Phase Typ	Start Date	End Date	Days Per V Work Day: Phase Description

Site prep/potholing	Site Prepa	1/3/2024	4/30/2024	5	85
Grading	Grading	5/1/2024	10/31/2025	5	393
Trenchless	Building C	10/1/2024	1/31/2025	7	123
Paving	Paving	5/1/2024	10/31/2025	5	393

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment	Fuel Type	Engine Tier	Number	p	Hours Per	Horsepow	Load Factor
Site prep/potholing	Tractors/L	Diesel	Average	1		8	84	0.37
Grading	Tractors/L	Diesel	Average	2		7	84	0.37
Grading	Dumpers/	Diesel	Average	2		7	16	0.38
Grading	Excavator	Diesel	Average	1		8	36	0.38
Grading	Concrete/	Diesel	Average	1		8	33	0.73
Grading	Cranes	Diesel	Average	1		6	367	0.29
Grading	Off-Highw	Diesel	Average	3		8	376	0.38
Grading	Pumps	Diesel	Average	1		8	11	0.74
Trenchless	Bore/Drill	Diesel	Average	1		24	83	0.5
Paving	Cement ar	Diesel	Average	1		6	10	0.56
Paving	Pavers	Diesel	Average	1		6	81	0.42
Paving	Paving Eq	Diesel	Average	1		8	89	0.36
Paving	Rollers	Diesel	Average	1		7	36	0.38
Paving	Air Compr	Diesel	Average	1		8	37	0.48
Paving	Generator	Diesel	Average	1		8	14	0.74
Paving	Sweepers/	Diesel	Average	1		8	36	0.46

5.2.2. Mitigated

Phase Name	Equipment	Fuel Type	Engine Tier	Number	p	Hours Per	Horsepow	Load Factor
Site prep/potholing	Tractors/L	Diesel	Tier 4 Final	1		8	84	0.37
Grading	Tractors/L	Diesel	Tier 4 Final	2		7	84	0.37
Grading	Dumpers/	Diesel	Average	2		7	16	0.38
Grading	Excavator	Diesel	Tier 4 Final	1		8	36	0.38
Grading	Concrete/	Diesel	Tier 4 Final	1		8	33	0.73
Grading	Cranes	Diesel	Tier 4 Final	1		6	367	0.29
Grading	Off-Highw	Diesel	Tier 4 Final	3		8	376	0.38
Grading	Pumps	Diesel	Average	1		8	11	0.74
Trenchless	Bore/Drill	Diesel	Average	1		24	83	0.5
Paving	Cement ar	Diesel	Average	1		6	10	0.56
Paving	Pavers	Diesel	Tier 4 Final	1		6	81	0.42
Paving	Paving Eq	Diesel	Tier 4 Final	1		8	89	0.36
Paving	Rollers	Diesel	Tier 4 Final	1		7	36	0.38
Paving	Air Compr	Diesel	Tier 4 Final	1		8	37	0.48
Paving	Generator	Diesel	Average	1		8	14	0.74
Paving	Sweepers/	Diesel	Tier 4 Final	1		8	36	0.46

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Ti	Miles per Trip	Vehicle Mix
Site prep/potholing				
Site prep/potholing	Worker	2.5	18.5	LDA,LDT1,LDT2
Site prep/potholing	Vendor		10.2	HHDT,MHDT
Site prep/potholing	Hauling	0	20	HHDT
Site prep/potholing	Onsite truck			HHDT

Grading			
Grading	Worker	27.5	18.5 LDA,LDT1,LDT2
Grading	Vendor		10.2 HHDT,MHDT
Grading	Hauling	22.3	20 HHDT
Grading	Onsite truck		HHDT
Paving			
Paving	Worker	17.5	18.5 LDA,LDT1,LDT2
Paving	Vendor		10.2 HHDT,MHDT
Paving	Hauling	0	20 HHDT
Paving	Onsite truck		HHDT
Trenchless			
Trenchless	Worker	0	18.5 LDA,LDT1,LDT2
Trenchless	Vendor	0	10.2 HHDT,MHDT
Trenchless	Hauling	0	20 HHDT
Trenchless	Onsite truck		HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Ti	Miles per Trip	Vehicle Mix
Site prep/potholing				
Site prep/potholing	Worker	2.5		18.5 LDA,LDT1,LDT2
Site prep/potholing	Vendor			10.2 HHDT,MHDT
Site prep/potholing	Hauling	0		20 HHDT
Site prep/potholing	Onsite truck			HHDT
Grading				
Grading	Worker	27.5		18.5 LDA,LDT1,LDT2
Grading	Vendor			10.2 HHDT,MHDT
Grading	Hauling	22.3		20 HHDT
Grading	Onsite truck			HHDT
Paving				
Paving	Worker	17.5		18.5 LDA,LDT1,LDT2
Paving	Vendor			10.2 HHDT,MHDT
Paving	Hauling	0		20 HHDT
Paving	Onsite truck			HHDT
Trenchless				
Trenchless	Worker	0		18.5 LDA,LDT1,LDT2
Trenchless	Vendor	0		10.2 HHDT,MHDT
Trenchless	Hauling	0		20 HHDT
Trenchless	Onsite truck			HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10	Red	PM2.5	Reduction
Water unpaved roads twice (55		55	
Limit vehicle speeds on unpa	44		44	
Sweep paved roads once per	9		9	

5.5. Architectural Coatings

Phase Name	Residentia	Residential	Non-Residenti	Non-Resid	Parking Area Coated (sq ft)
Trenchless	0	0	0	0	0

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material In	Material Ex	Acres Graded	Material Out	Acres Paved (acres)
Site prep/potholing			0	0	
Grading	35000	35000	0	0	
Paving	0	0	0	0	1.35

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61	61
Water Demolished Area	2	36	36

5.7. Construction Paving

Land Use	Area Paved	% Asphalt
Other Asphalt Surfaces	1.35	100

5.8. Construction Electricity Consumption and Emissions Factors

Year	kWh per Y	CO2	CH4	N2O
2024	0	532	0.03	< 0.005
2025	0	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Week	Trips/Saturday	Trips/Sunday	Trips/Year	VT/Week	VT/Saturday	VT/Sunday	VT/Year
Other Asphalt Surfaces	0	0	0	0	0	0	0	0

5.9.2. Mitigated

Land Use Type	Trips/Week	Trips/Saturday	Trips/Sunday	Trips/Year	VT/Week	VT/Saturday	VT/Sunday	VT/Year
Other Asphalt Surfaces	0	0	0	0	0	0	0	0

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
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5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
-------------	----------------------

5.10.2. Architectural Coatings

Residential Interior Area Coated	Residential Non-Residential	Non-Residential	Parking Area Coated (sq ft)
0	0	0	3540

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0
Summer Days	day/yr	0

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0
Summer Days	day/yr	0

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Land Use	Electricity	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Other Asphalt Surfaces	0	532	0.033	0.004	0

5.11.2. Mitigated

Land Use	Electricity	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Other Asphalt Surfaces	0	532	0.033	0.004	0

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water	Outdoor Water (gal/year)
Other Asphalt Surfaces	0	0

5.12.2. Mitigated

Land Use	Indoor Water	Outdoor Water (gal/year)
Other Asphalt Surfaces	0	0

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton)	Cogeneration (kWh/year)
Other Asphalt Surfaces	0	

5.13.2. Mitigated

Land Use	Waste (ton)	Cogeneration (kWh/year)
Other Asphalt Surfaces	0	

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment	Refrigerant	GWP	Quantity (lb)	Operation Service Life (Years)	Times Serviced
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5.14.2. Mitigated

Land Use Type	Equipment	Refrigerant	GWP	Quantity (lb)	Operation Service Life (Years)	Times Serviced
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5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per D	Hours Per Day	Horsepower Load Factor
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5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per D	Hours Per Day	Horsepower Load Factor
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5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per D	Hours per Day	Hours per Week	Horsepower Load Factor
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5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Annual Heat Input (MMBtu/yr)
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5.17. User Defined

Equipment Type	Fuel Type
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5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Initial Acres	Final Acres
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5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres
--------------------	---------------	-------------

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity S	Natural Gas Saved (btu/year)
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5.18.2.2. Mitigated

Tree Type	Number	Electricity S	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will

Climate Hazard	Result for	Unit
Temperature and Extreme Heat	13.1 annual days of extreme heat	
Extreme Precipitation	4.3 annual days with precipitation above 20 mm	
Sea Level Rise	0 meters of inundation depth	
Wildfire	0 annual hectares burned	

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure	Sensitivity	Adaptive Capacity	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure. The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure	Sensitivity	Adaptive Capacity	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure. The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
-----------	---------------------------------

Exposure Indicators

AQ-Ozone	55.4
AQ-PM	78.1
AQ-DPM	71.7
Drinking Water	54.5
Lead Risk Housing	48.1
Pesticides	72
Toxic Releases	93.2
Traffic	96.8

Effect Indicators

CleanUp Sites	0
Groundwater	14.3
Haz Waste Facilities/Generators	58.8
Impaired Water Bodies	0
Solid Waste	52.9

Sensitive Population

Asthma	25.5
Cardio-vascular	19.9
Low Birth Weights	32.5

Socioeconomic Factor Indicators

Education	75.6
Housing	80.1
Linguistic	64.1

Poverty	65.3
Unemployment	41.8

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
-----------	---------------------------------

Economic

Above Poverty	28.01232
Employed	41.16515
Median HI	61.41409

Education

Bachelor's or higher	53.54806
High school enrollment	100
Preschool enrollment	27.35789

Transportation

Auto Access	48.06878
Active commuting	71.64122

Social

2-parent households	67.57346
Voting	48.05595

Neighborhood

Alcohol availability	34.7748
Park access	2.194277
Retail density	54.22815
Supermarket access	80.54664
Tree canopy	15.16746

Housing

Homeownership	54.04851
Housing habitability	31.1305
Low-inc homeowner severe	25.38175
Low-inc renter severe housir	19.28654
Uncrowded housing	18.76043

Health Outcomes

Insured adults	10.09881
Arthritis	70
Asthma ER Admissions	78
High Blood Pressure	65
Cancer (excluding skin)	58
Asthma	43
Coronary Heart Disease	58
Chronic Obstructive Pulmon:	40
Diagnosed Diabetes	61
Life Expectancy at Birth	96
Cognitively Disabled	87
Physically Disabled	74
Heart Attack ER Admissions	77
Mental Health Not Good	37
Chronic Kidney Disease	65
Obesity	48
Pedestrian Injuries	20
Physical Health Not Good	41
Stroke	52

Health Risk Behaviors	
Binge Drinking	17
Current Smoker	41
No Leisure Time for Physical	41
Climate Change Exposures	
Wildfire Risk	0
SLR Inundation Area	0
Children	38
Elderly	71
English Speaking	30
Foreign-born	79
Outdoor Workers	20
Climate Change Adaptive Capacity	
Impervious Surface Cover	26
Traffic Density	94
Traffic Access	66
Other Indices	
Hardship	68
Other Decision Support	
2016 Voting	73

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score fo	63
Healthy Places Index Score fr	40
Project Located in a Designat No	
Project Located in a Low-Incr Yes	
Project Located in a Commur No	

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

Measure Title	Co-Benefits Achieved
---------------	----------------------

7.5. Evaluation Scorecard

Category	Number o Total Points Max Possible l Weighted Score
----------	---

7.6. Health & Equity Custom Measures

Measure Title	Sponsor
---------------	---------

8. User Changes to Default Data

Screen	Justification
Operations: Landscape Equip	No landscaping
Construction: Construction P	see project description.
Construction: Off-Road Equip	from similar examples, project description
Construction: Architectural C	coatings during paving stage
Operations: Architectural Co	no change from existing

APPENDIX B: BIOLOGICAL TECHNICAL MEMORANDUM

June 1, 2022

Haley Johnson
Woodard & Curran
9665 Chesapeake Drive, Suite 320
San Diego, CA 92123

Re: Biological Review: OCSAN Taft Avenue Sewer Rehabilitation Project

Dear Haley:

This biological review provides the results of a desktop literature of the Taft Avenue Sewer Rehabilitation Project (Project) proposed by the Orange County Sanitary District (OCSAN). The Project is located in the City of Orange (City) in Orange County, California.

PROJECT DESCRIPTION

The proposed Project, known as project 2-49 Taft, involves replacement and relocation of the existing sewer line within the City's rights-of-way, specifically along Meats Avenue west from Santiago Boulevard to Breckinridge Street, south along Sacramento Street, west along Taft Avenue, crossing Caltrans State Route 55, south along Tustin Street, and west along Taft Avenue to Glassell Street. Two staging areas are proposed to support construction, both located on the south side of Taft Avenue on opposite sides of the Costa Mesa Freeway (Hwy 55) and referred to as West (0.5-acre) and East (2.0 acre).

PURPOSE & SCOPE

The majority of the Project was analyzed in the *2020 Facilities Master Plan Programmatic Environmental Impact Report for the 2017 Facilities Master Plan* (PEIR).¹ Two segments east of Tustin Street along Taft Avenue and Sacramento Street deviate from that studied in the PEIR. Likewise, the proposed staging areas were not covered in the PEIR.

As such, this Biological Review focuses on the current Project alignment and two proposed staging areas, as shown on Figure 1. The text summarizes the results of SWCA's desktop review of on-line data bases and aerial photos.

VICINITY CHARACTERISTICS

The Project is in City's urban core, dominated by commercial, residential and transportation land uses. All project components are located in fully developed and/or landscaped and maintained areas. Both of the staging areas are manicured lawn and/or mowed-disturbed-ruderal land underneath SCE high tension power lines.

¹ Dudek, December 2020. Prepared for Orange County Sanitation District. SCH No. 2019070998

LITERATURE SEARCH

A literature search was completed to discover previously identified extant special-status flora, fauna, or habitats in the Project vicinity. Special-status species include plants and animals listed as endangered, threatened, or candidate for listing as endangered or threatened under the federal Endangered Species Act, the California Endangered Species Act, or both. This term also includes all plant species listed by the state as rare and those species listed by the California Native Plant Society (CNPS)² with a Rare Plant Rank (RPR) of 1, 2 or 4, and those included on the current CDFW “Special Vascular Plants, Bryophytes, and Lichens List.”³ Also included are wildlife species designated by the California Department of Fish and Wildlife (CDFW) as Fully Protected, Species of Special Concern, Watch List species, and other wildlife included in the most current CDFW “Special Animals List.”⁴ The latter two CDFW lists are used to define current protected species.

Occurrence records in the California Natural Diversity Database (CNDDDB) and CNPS Rare Plant Inventory (Inventory) were checked for current records. Additional database and mapping resources reviewed included U.S. Fish and Wildlife Service (USFWS) species lists and critical habitat maps, eBird, and vegetation and land-use mapping. Google Earth aerial photos were studied to understand the local and regional context of the immediate Project vicinity potential impacted by proposed construction.

State & Federal Regulations

The federal Migratory Bird Treaty Act (MBTA) prohibits any person, unless permitted by regulations, to

...pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatsoever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention ... for the protection of migratory birds ... or any part, nest, or egg of any such bird. (16 United States Code (USC) 703)

The list of migratory birds includes nearly all bird species native to the United States. The statute was extended in 1974 to include parts of birds, as well as eggs and nests. The Migratory Bird Treaty Reform Act of 2004 further defined species protected under the act and excluded all non-native species. Thus, it is illegal under MBTA to directly kill, or destroy a nest of, nearly any native bird species.

Section 3503 of the State of California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 provides protection for all birds of prey, including their eggs and nests. Take or possession of any migratory non-game bird as designated in the MBTA is prohibited by Section 3513 of the Fish and Game Code.

FINDINGS

As noted above, the Project is fully developed (pipeline alignment) and/or manicured/disturbed grassland (both staging areas). The literature search did not discover any current, extant special-status resources and none are expected to occur given the developed/disturbed conditions and lack of native plant communities

² California Native Plant Society. 2022. Inventory of Rare, Threatened, and Endangered Plants of California. Online edition, v8-03 0.39.

³ California Department of Fish and Wildlife (CDFW). April 2022. California Natural Diversity Database: Special Vascular Plants, Bryophytes and Lichens List.

⁴ California Department of Fish and Wildlife. April 2022. California Natural Diversity Database: Special Animals List.

Nesting bird habitat potential is low, due to developed/disturbed conditions. Street trees are present but offer low quality nesting opportunities due to their sparse growth habit from frequent maintenance pruning and moderate to high traffic with associated noise and dust along adjacent streets.

RECOMMENDATIONS

PEIR Mitigation Measures

The PEIR specifies mitigation measures to be implemented to protect nesting birds, summarized below (refer to PEIR for exact wording):

MM-BIO-1: Nesting Bird Avoidance. Construction shall avoid the migratory bird nesting season (typically February 1 through August 31). If construction will occur during this timeframe, avian surveys of the Project and suitable habitat in the surrounding 500-foot area shall be conducted to search for active nests within 72-hours prior to construction start-up. Active nests will be flagged and an appropriate buffer established surrounding the nest, to be determined by Project Biologist. The nest shall be avoided until vacated and juveniles have fledged. No Project activities shall occur within the buffer until the Project Biologist determines that the nest is no longer active.

OCSAN General Requirements

The Sanitary District published General Requirements for contractors.⁵ The following (item T, page 17) covers the Protection of Wildlife:

“If any Work in this Contract might disturb wildlife, even in urban areas, a Biological Monitor shall be hired by the CONTRACTOR to provide assistance in the field to assure that biological resources are protected and that Project-specific mitigation measures are implemented. The Biological Monitor shall be qualified for the tasks to be performed. If endangered or threatened species are present in the Project area and require removal or relocation, the Biological Monitor shall hold the appropriate permits and approvals for access and capture or marking of the species of concern.

Specific activities of the Biological Monitor may include the following:

- Marking areas to be protected from construction activity.
- Observing construction activities and their impacts on biota.
- Capturing and relocating biota as necessary to protect them from construction activities.

Prior to the removal of healthy trees at a worksite, a Biological Monitor shall survey the trees to determine if active bird nests are present. If nests of sensitive species are present, tree removal will be scheduled to avoid the nesting season. CONTRACTOR shall provide a written record of whether tree removal is required and, as needed, hire a biologist or provide documentation that nesting birds (listed species of special interest of those as threatened or endangered) are not present in the trees to be removed. Refer to the Specification section(s) regarding detailed landscaping requirements.”

⁵ District 6 Trunk Sewer Relief Project No. 6-17 *General Requirements*.

CONCLUSIONS

The Project does not provide unique or high-quality biological habitat values. Non-native plants dominate the parcel. Development of the Project as proposed is not anticipated to result in significant adverse impacts to special-status or protected biological resources, given implementation of the mitigation measures regarding breeding/nesting bird surveys.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Worden", written in a cursive style.

Jackie Bowland Worden
Lead Biologist/Natural Resources Project Manager

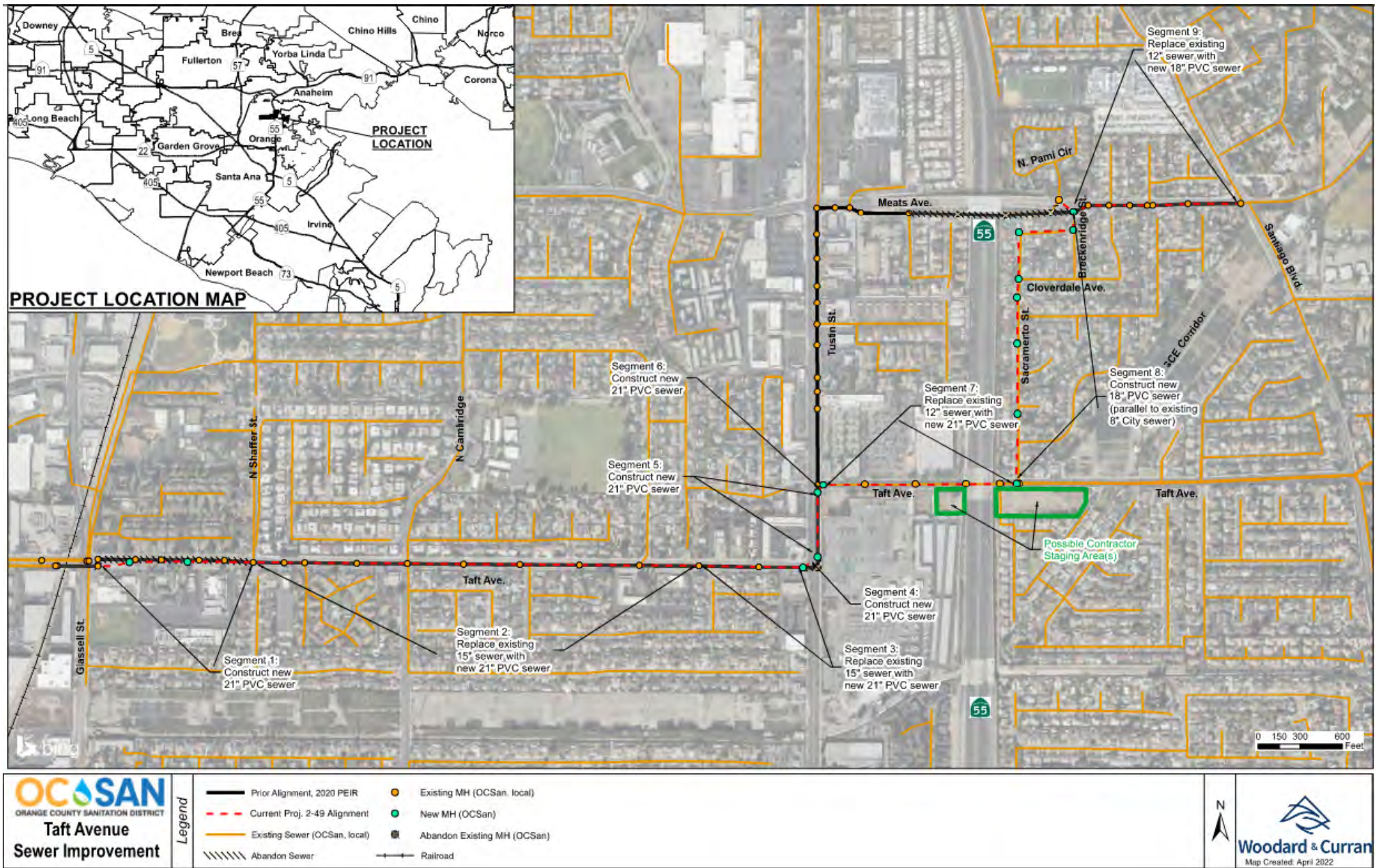


Figure 1. Site Plan

**APPENDIX C: TRIBAL CULTURAL RESOURCES CONSULTATION
(CONFIDENTIAL)**

APPENDIX D: GEOTECHNICAL INVESTIGATION REPORT

Geotechnical Data Report Taft Branch Improvements Orange County Sanitation District Project 2-49 Orange, California

Woodard & Curran

24422 Avenida de la Carlota, Suite 180 | Laguna Hills, California 92653

June 7, 2023 | Project No. 211663001



Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

Geotechnical Data Report Taft Branch Improvements Orange County Sanitation District Project 2-49 Orange, California

Mr. Kraig Erickson

Woodard & Curran

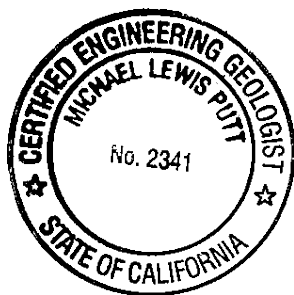
24422 Avenida de la Carlota, Suite 180 | Laguna Hills, California 92653

June 7, 2023 | Project No. 211663001



Michael L. Putt, PG, CEG
Principal Geologist

ANP/JRS/MLP/DBC/mlc



Daniel Chu, PhD, PE, GE
Chief Geotechnical Engineer



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- A – Boring Logs
- B – Laboratory Testing
- C – Analytical Testing

1 INTRODUCTION

In accordance with your request and authorization, Ninyo & Moore has performed a geotechnical evaluation and prepared this Geotechnical Data Report for the Orange County Sanitation District Taft Branch Improvements project located in the city of Orange, California (Figure 1). We previously performed a preliminary geotechnical evaluation for the project (Ninyo & Moore, 2021). The purpose of our geotechnical services was to evaluate the soil and geologic conditions at the project site and develop recommendations for the geotechnical design and construction of the proposed improvements. This report presents our findings, conclusions, and recommendations regarding the project.

2 SCOPE OF SERVICES

Our scope of services for the geotechnical evaluation included the following:

- Project coordination, planning, and scheduling of the subsurface exploration.
- Review of readily available background materials, including published geologic maps and literature, in-house information, and stereoscopic aerial photographs. We also reviewed pertinent geotechnical information, as-built plans, and California Department of Transportation (Caltrans) bridge inspection records that were provided to us by Woodard & Curran, Orange County Sanitation District (OCSD), and the City of Orange.
- A field reconnaissance to observe and document the existing site conditions and to mark boring locations for utility clearance by Underground Service Alert.
- Subsurface exploration consisting of drilling, logging, and sampling eighteen small-diameter borings to depths ranging from approximately 17 to 20½ feet below the ground surface. The borings were logged by a representative from Ninyo & Moore and soil samples were collected for laboratory testing.
- Geotechnical laboratory testing of selected soil samples to evaluate in-situ moisture content and dry density, percentage of particles finer than the no. 200 sieve, direct shear strength, and soil corrosivity.
- Analytical testing of drummed site materials for soil disposal. Drummed materials were disposed by a licensed hazardous materials contractor at an approved disposal/recycling facility.
- Data compilation and engineering analysis of the information obtained from our background review, subsurface evaluation, and laboratory testing.
- Preparation of this geotechnical report presenting our findings, conclusions, and recommendations for design and construction of the project.

3 PROJECT UNDERSTANDING

Based on our review of the Request for Proposals (OCSD, 2020), the selected alignment exhibit (Woodard & Curran, 2022) you provided, and on our discussions with the design team, we understand that the project will include the design of a new approximately 10,700-foot-long sewer pipeline to replace the existing Taft Branch sewer pipeline that becomes deficient under the wet weather flow model. The project will increase the size of the sewer in order to eliminate deficiencies in capacity. The project will also include the removal and replacement of existing manholes with 60-inch diameter manholes, constructing new manholes, and abandoning some existing sewer pipelines.

The proposed Taft Branch sewer improvements will extend from the upstream connection point at the intersection of North Santiago Avenue and Meats Avenue to the downstream connection point at the intersection of Taft Avenue and Glassell Street in the City of Orange, California (Figure 2). From the downstream connection point to where Taft Avenue continues to the east from North Tustin Street, the existing 15-inch pipeline will be replaced with a new parallel 21-inch pipeline. A new 21-inch pipeline will be constructed parallel to an existing City of Orange sewer pipeline and will extend east along Taft Avenue, beneath the 55 Freeway overpass to Sacramento Street. On Sacramento Street, a new 18-inch pipeline will continue to the north to East Brentford Avenue, North Breckenridge Street and Meats Avenue. On Meats Avenue, the new pipeline will continue east up to the connection point near Santiago Boulevard and will consist of an 18-inch pipe installed in the median and replacing the existing 18-inch pipe. The existing pipelines generally range from approximately 10 to 15 feet deep. We understand that the new pipelines will be constructed via an open-cut trench.

4 SITE DESCRIPTION

As described above, the proposed sewer alignment will be located within the right of way along Meats Avenue, North Breckenridge Street, East Brentford Avenue, North Sacramento Street, East Taft Avenue, North Tustin Avenue, and Taft Avenue. North Tustin, Meats, and Taft Avenues are arterial roads and consist of 4 to 6 lanes with left turn pockets. North Breckenridge Street, East Brentford Avenue, and North Sacramento Street consist of two-lane residential roads. All roads are paved with asphalt concrete. Several utilities are buried within the streets and overhead power and communication lines are present. The elevation along the alignment ranges from approximately 200 feet above mean sea level (MSL) near the western end of the proposed alignment to approximately 300 feet above MSL near the eastern end of the alignment (United States Geological Survey [USGS], 2018).

5 SUBSURFACE EVALUATION AND LABORATORY TESTING

Our subsurface exploration was conducted on April 7 through 19, 2022, and consisted of drilling, logging, and sampling of eighteen small-diameter exploratory borings, borings B-1 through B-11 and B-14 through B-20. Borings B-12 and B-13 that were planned on Taft Avenue near the 55 Freeway were not performed due to the street being recently resurface and a moratorium that would not allow for pavement cores within the street without extensive repaving.

The borings were drilled to depths ranging from approximately 10 to 20½ feet using a truck-mounted drill rig with hollow-stem augers. The purpose of the exploratory borings was to observe the subsurface materials and collect bulk and relatively undisturbed samples for laboratory testing. The approximate locations of the exploratory borings are shown on Figures 2 through 7. Logs of the exploratory borings are presented in Appendix A.

Geotechnical laboratory testing was performed on representative soil samples to evaluate the in-situ moisture content and dry density, gradation, percentage of particles finer than the No. 200 sieve, Atterberg limits, direct shear strength, expansion index, sand equivalent, soil corrosivity, and R-Value. In-situ moisture and dry density test results are presented on the boring logs in Appendix A. The remaining laboratory tests are presented in Appendix B.

Soil samples collected during the field exploration were screened for volatile organic compounds (VOCs) using a Peak ground acceleration (PID). The PID measures organic vapors in parts per million (ppm). Samples were monitored for vapor readings of more than 45 ppm. The PID readings are presented on the boring logs in Appendix A. Elevated PID readings were measured in the near surface soils in boring B-8 through B-10 and some hydrocarbon odors were noted in some of the soils. Selected soil samples were analyzed for the presence of Total Petroleum Hydrocarbons (TPH), Title 22 Metals, and VOCs, in general accordance with United States Environmental Protection Agency (EPA) Methods 8015M, 6010B/7471A, and 8260B, respectively. Low concentrations of TPH in the motor oil range (22 to 170 mg/kg) were reported in the samples collected from B-8 (1.3-1.3 feet), B-9 (7-9 feet) and B-10 (19-20.5 feet) and in the diesel range (17 mg/kg) were reported in B-9 (7-9 feet). These concentrations did not exceed regulatory screening levels. Metals concentrations were within background concentrations found in southern California soils and did not exceed regulatory screening levels.

For the purpose of characterizing the auger cuttings prior to disposal off-site, composite samples of the soils were collected in glass jars, placed into a chilled container, and submitted to a state-certified laboratory for analysis. The soil samples were analyzed for the presence of TPH, Title 22 Metals, and VOCs, in general accordance with EPA Methods 8015M, 6010B/7471A, and 8260B,

respectively. The soil samples were classified as non-hazardous waste and the drums were disposed of at a legal dump facility. The soil analytical test results are presented in Appendix C.

5.1 Previous Subsurface Exploration

Our geotechnical review included review of as-built sewer improvement plans, materials reports, and Caltrans bridge inspection reports that were provided to us by OCSan and the City of Orange. The as-built construction drawings for the Taft Branch Sewer (County Sanitation Districts of Orange County, 1960) did not include geotechnical or other soil boring information.

A materials report was prepared by the County of Orange for the proposed widening of Tustin Avenue from 750 feet south of Chapman Avenue to Lincoln Avenue in the City of Orange (County of Orange, 1965a). The materials report included 18 borings along Tustin Avenue, including 3 borings (B-12, B-13, and B-14) between Meats Avenue and Taft Avenue, near the proposed sewer pipeline. The materials encountered in those borings consisted of clay, silty clay, and sandy clay. The soil survey sheet that includes borings B-12, B-13, and B-14 is presented in Appendix A. The locations of the borings are presented in Figure 2.

Boring logs were also shown on County Sanitation District No. 2 of Orange County construction plans for the Taft Interceptor Sewer (County Sanitation Districts No. 2 of Orange County, 1985). The Borings (B-1 through B-3) were performed along Taft Avenue between Main Street and Glassell Street, west of the proposed new alignment. The materials encountered in the borings generally consisted very fine to fine, silty sand, clayey sand, and sandy silt. The pages from the County Sanitation Districts plans that include the logs of borings are presented in Appendix A. The location of Boring No. 3 is presented on Figure 2. Boring Nos. 1 and 2 are located west of Boring No. 3 and are beyond the limits of the site plan presented in Figure 2.

We also reviewed Caltrans as-built construction drawings associated the Meats Avenue Overcrossing and the Taft Avenue Undercrossing, which included Log of Test Borings sheets with the as-built plans. The Log of Test Boring sheets for the Meats Avenue Overcrossing are presented in Appendix A, which include borings associated with the construction of the original bridge (Caltrans, 1962) and the replacement bridge (Caltrans, 1998a). The log of Test Borings indicate that the subsurface soils generally consisted of stiff silty clay to clayey silt near the surface, and dense to very dense silty sand, gravel, and cobbles below. Refusal was encountered in very dense gravelly soils in some of the hollow-stem auger borings for the Meats Avenue bridge. The Log of Test Boring sheets for the Taft Avenue Undercrossing (formerly known as the Orange Avenue Undercrossing) are presented in Appendix A. Similar soil conditions were encountered in the borings performed for the Taft Avenue bridge as were described for the Meats Avenue bridge,

including near surface stiff to very stiff fine silty clay and clayey silt with dense to very dense sand and gravel below. Refusal was also encountered in some of these borings in very dense sand and gravel (Caltrans, 1967 and 1998b).

6 GEOLOGY AND SUBSURFACE CONDITIONS

6.1 Regional Geology Setting

The project alignment is located within the southerly portion of the Los Angeles Basin, which is situated near the northern end of the Peninsular Ranges Geomorphic Province. The Los Angeles Basin has been divided into four structural blocks, which are generally bounded by prominent fault systems: The Northwestern Block, the Southwestern Block, the Central Block, and the Northeastern Block (Norris and Webb, 1990). The subject site is located within the Central Block, which is bordered on the west by the Newport-Inglewood fault, on the east by the Whittier-Elsinore fault, on the north by the Malibu Coast-Santa Monica-Raymond fault, and on the south by the San Joaquin Hills. The Central Block is characterized by thick sequences of alluvium overlying predominantly sedimentary rock of Cretaceous through Pleistocene age. The depths to crystalline basement rocks are known from petroleum well logs and geophysical data. The total thickness of sedimentary section is roughly 4,000 meters (i.e., about 13,000 feet) near the southern end of the Los Angeles Basin, and exceeds 9,000 meters (i.e., about 30,000 feet in the deepest portion of the block) (Norris and Webb, 1990).

6.2 Project Area Geology

The western end of the proposed sewer alignment is located approximately 5,000 feet east of the Santa Ana River Channel. Regional geologic mapping indicates that the eastern portion of the alignment is underlain by Holocene and latest Pleistocene age young alluvial fan deposits consisting of gravel, sand, and silt. The western portion of the alignment is underlain by late to middle Pleistocene age old alluvial fan deposits generally consisting of reddish brown, gravel and sand. The regional geologic conditions are shown on Figure 8.

Generalized descriptions of the materials encountered at the site during our subsurface exploration are presented below. The materials encountered during our subsurface exploration generally consisted of asphalt concrete (AC) pavement sections, fill soils, and alluvial deposits. More detailed descriptions are presented on the boring logs in Appendix A.

6.2.1 Pavement Sections

The pavement sections consisted of approximately 4 to 20 inches of AC over approximately 0 to 10 inches of base. The aggregate base generally consisted of medium dense silty gravel and clayey gravel. In boring B-11 approximately 6 inches of concrete was observed below the AC.

6.2.2 Fill

Fill was encountered below the pavement sections in borings B-2 through B-5, B-8 through B-11, and B-14 and ranged in depth up to approximately 4 feet. The fill generally consisted of reddish brown, moist, hard, sandy clay with trace gravel, and loose to medium dense clayey sand, silty and sandy gravel, clayey gravel, and sandy silt.

6.2.3 Alluvium

Alluvium was encountered beneath the fill and beneath the pavement in borings B-1, B-6, B-7, and B-15 through B-20 to the total depths explored of approximately 20½ feet. The alluvium generally consisted of moist, firm to hard, sandy lean clay, fat clay, and silt, and medium dense to very dense silty gravel, clayey gravel, poorly graded gravel, clayey sand, silty sand, and sand. The granular alluvial soils contained varying amounts of gravel and cobbles that resulted in difficult drilling conditions. Drilling refusal was encountered in borings B-1, B-3, B-8, B-9, B-15, and B-16 due to very dense gravel and possible cobbles.

7 GROUNDWATER

Groundwater was not observed at the time of drilling in each of the borings B-1 through B-20. Historically high groundwater in the area of the sewer alignment is mapped as greater than 40 feet below the ground surface (Department of Conservation Division of Mines and Geology [CDMG], 1997). Figure 9 presents the depths to historic high groundwater in the project area. In addition, a groundwater monitoring well located approximately 0.2 miles south of the alignment recorded groundwater at a depth of approximately 78 feet below the ground surface (State of California, 2021). Groundwater was not encountered in the borings performed for the Meats Avenue and Taft Avenue Bridges (Caltrans, 1962, 1967, 1998a, b). Fluctuations in the level of groundwater may occur due to variations in the level of tidal fluctuations, ground surface topography, subsurface stratification, rainfall, irrigation practices, groundwater pumping, and other factors which may not have been evident at the time of our field evaluation.

8 FAULTING AND SEISMICITY

The pipeline alignment is not located within a State of California Earthquake Fault Zone (formerly known as Alquist-Priolo Special Studies Zone). However, the site is located in a seismically active area, as is the majority of southern California, and the potential for strong ground motion in the project area is considered significant during the design life of the proposed improvements. The numerous faults in southern California include active, potentially active, and inactive faults. As defined by the California Geological Survey, active faults are faults that have ruptured within the Holocene time, or within approximately the last 11,000 years. Potentially active faults are those that show evidence of movement during Quaternary time (approximately the last 1.6 million years) but for which evidence of Holocene movement has not been established. Inactive faults have not ruptured in the last approximately 1.6 million years. The approximate locations of major faults in the site vicinity and their geographic relationship to the site are shown on Figure 5.

In addition to the mapped faults shown on Figure 5, the Coyote Hills segment of the Puente Hills blind thrust fault is located approximately 5.8 miles from the site (USGS, 2008). Blind thrust faults are low-angle faults at depths that do not break the surface and are, therefore, not shown on Figure 10. Although blind thrust faults do not have a surface trace, they can be capable of generating damaging earthquakes.

The principal seismic hazards at the subject site are surface fault rupture, ground motion, and liquefaction. A brief description of these hazards and the potential for their occurrences on site are discussed below.

8.1 Surface Fault Rupture

Based on our review of the referenced literature and our site reconnaissance, no active faults are known to cross the force main alignment. Therefore, the probability of damage from surface fault rupture is considered to be low. However, lurching or cracking of the ground surface as a result of nearby seismic events is possible.

8.2 Ground Motion

Considering the proximity of the site to active faults capable of producing a maximum moment magnitude of 6.0 or more, the project area has a high potential for experiencing strong ground motion. The 2022 CBC specifies that the risk-targeted maximum considered earthquake (MCE_R) ground motion response accelerations be used to evaluate seismic loads for design of buildings and other structures. The MCE_R ground motion response accelerations are based on the spectral response accelerations for 5 percent damping in the direction of maximum horizontal response

and incorporate a target risk for structural collapse equivalent to 1 percent in 50 years with deterministic limits for near-source effects. The horizontal peak ground acceleration (PGA) that corresponds to the MCE_R for the project area at the mid-point of the alignment (at the intersection of E. Taft Avenue and N. Tustin Street) was calculated as 0.585g using the 2021 Applied Technology Council (ATC) seismic design tool (web-based).

The 2022 CBC specifies that the potential for liquefaction and soil strength loss be evaluated, where applicable, for the mapped maximum considered earthquake geometric mean (MCE_G) peak ground acceleration (PGA_M) with adjustment for site class effects in accordance with the American Society of Civil Engineers (ASCE) 7-16 Standard. The MCE_G PGA is based on the geometric mean PGA with a 2 percent probability of exceedance in 50 years. The PGA_M was calculated as 0.736g using the 2021 ATC seismic design tool.

8.3 Liquefaction

Liquefaction is the phenomenon in which loosely deposited granular soils and non-plastic silts located below the water table undergo rapid loss of shear strength when subjected to strong earthquake-induced ground shaking. Ground shaking of sufficient duration results in the loss of grain-to-grain contact due to a rapid rise in pore water pressure, and causes the soil to behave as a fluid for a short period of time. Liquefaction is known generally to occur in saturated or near-saturated cohesionless soils at depths shallower than 50 feet below the ground surface. Factors known to influence liquefaction potential include composition and thickness of soil layers, grain size, relative density, groundwater level, degree of saturation, and both intensity and duration of ground shaking. Based on our review of the Seismic Hazard Map for the Orange Quadrangle (California Department of Conservation, 19998), the site is not located in a liquefaction hazard zone and liquefaction is not a design consideration for the project.

9 CONCLUSIONS

Based on the results of our geotechnical evaluation, it is our opinion that the proposed improvements are feasible from a geotechnical standpoint, provided the recommendations presented in this report are incorporated into the design and construction of the project. In general, the following conclusions were made:

The primary geotechnical concern for the project includes the presence granular sand and gravel alluvial fan deposits that were observed to be dense to very dense and contain significant amounts of cobbles. Difficult drilling conditions were encountered in the granular deposits and several borings encountered auger and/or sampler refusal. Difficult excavating conditions should be

anticipated during open-cut trenching and excavations are anticipated to generate oversize materials that will not be suitable for re-use in trench backfill.

A summary of our additional geotechnical conclusions are listed below.

- The site is underlain by fill soils and alluvial deposits. The fill soils generally consisted of moist, hard, sandy clay with trace gravel, and loose to medium dense clayey sand, silty and sandy gravel, clayey gravel, and sandy silt. Alluvial deposits encountered generally consisted of moist, firm to hard, sandy lean clay, fat clay, and silt, and medium dense to very dense silty gravel, clayey gravel, poorly graded gravel, clayey sand, silty sand, and sand with carrying amounts of cobbles.
- Excavation of the on-site materials should be feasible with excavators, backhoes, or other earthmoving equipment in good working order. However, difficult excavating conditions should be planned for by the contractor where very dense granular materials are encountered.
- We anticipate that excavated soils should be generally suitable for use as compacted fill following moisture-conditioning provided they are free of trash, debris, roots, vegetation, deleterious materials, and cobbles or hard lumps of material in excess of 4 inches in diameter.
- Groundwater was not observed at the time of drilling in each of the borings B-1 through B-20. Historically high groundwater in the area of the sewer alignment is mapped as greater than 40 feet below the ground surface (CDMG, 1997). Shallow groundwater conditions and dewatering is not anticipated during construction.
- Temporary shoring for trenching should be designed by the contractor to support the excavation sidewalls and to reduce the potential for settlement of the adjacent roadway and existing utilities. Excavations and shoring should conform to the Occupational Safety and Health Administration (OSHA) standards for Type C soil.
- Existing utilities are present along the project alignment, including pipelines trending parallel with the subject alignment. Care should be taken to avoid damaging and/or undermining nearby utilities and other adjacent structures. Shoring design and installation procedures should be developed that reduce the potential for damage to existing improvements.
- The proposed sewer pipeline alignment is not located within a State of California Earthquake Fault Zone (formerly known as the Alquist-Priolo Special Studies Zone). Based on our review of published geologic maps, there are no known active faults underlying the alignment. Therefore, the potential for surface rupture at the site is considered to be low.
- The proposed sewer pipeline alignment is not located within an area mapped by the State of California (CDMG, 1999) as being susceptible to earthquake-induced liquefaction.
- Our limited laboratory corrosion testing indicates that the on-site soils can be classified as corrosive based on California Department of Transportation (Caltrans, 2018) corrosion guidelines.

10 RECOMMENDATIONS

The recommendations presented in the following sections provide general geotechnical criteria regarding the design and construction of the sewer pipeline. The recommendations are based on the results of our subsurface evaluation and laboratory testing, our review of the referenced geologic materials, and our geotechnical analysis. The proposed construction should be

performed in conformance with the recommendations presented in this report, project specification, and appropriate agency standards.

10.1 Earthwork

Based on our understanding of the project, earthwork is anticipated to include excavations up to approximately 15 feet deep and backfilling and compaction around the new pipelines and manholes. The on-site soils will be generally excavatable utilizing conventional excavation equipment, but are anticipated to be difficult in the very dense granular materials. In addition, abandoned, buried utilities and/or structures may be present. In general, earthwork should be performed in accordance with the standard specifications for public works construction. Work within the public right-of-way for trenched excavations should comply with the requirements of the “Greenbook” Standard Specifications for Public Works Construction. Earthwork should be performed in accordance with the requirements of applicable governing agencies and the recommendations presented in the following sections.

10.1.1 Construction Plan Review and Pre-Construction Conference

We recommend that the construction plans be submitted to Ninyo & Moore for review to evaluate conformance to the geotechnical recommendations provided in this report. We further recommend that a pre-construction conference be held. The owner and/or their representative, the governing agency representatives, the civil engineer, the geotechnical engineer, and the contractor should be in attendance to discuss the work plan and project schedule. Discussions should include how earthwork will be performed, site safety, and regulatory agency requirements.

10.1.2 Site Clearing

Prior to performing site excavations, the alignment should be cleared of surface obstructions, debris, abandoned utilities, and other deleterious materials. Existing utilities within the project limits should be re-routed or protected from damage by construction activities. Obstructions that extend below finish grade, if any, should be removed and the resulting holes filled with compacted soils. Materials generated from the clearing operations should be removed from the project site and disposed at a legal dumpsite.

10.1.3 Excavation Characteristics

Based on our subsurface exploration and experience, we anticipate that excavations within fill and alluvial soils at the site may be accomplished with heavy earthmoving equipment, including backhoes, excavators, or other trenching equipment in good condition. We

anticipate that the materials along the alignment will vary from medium dense to very dense silty gravel, clayey gravel, poorly graded gravel, clayey sand, silty sand, and sand, and firm to hard, sandy lean clay, fat clay, and silt. As described above, the granular deposits are very dense and have high percentages of gravel and cobbles. Boulders may also be encountered. Numerous borings encountered difficult drilling conditions and auger and sampler refusal was encountered in some borings. Difficult excavating conditions should be planned for by the contractor, including screening of oversize materials from trench backfill.

10.1.4 Temporary Excavations and Shoring

Some of the soils along the project alignment have little cohesion that are considered to be prone to caving. In addition, excavations that are close to parallel utilities may encounter loose trench zone materials which are also considered unstable. The site soils should be treated as “Type C” soils in accordance with the OSHA criteria.

Temporary excavations should be stable at inclinations near 1:1 (horizontal to vertical) up to a depth of about 4 feet below the existing grade and stable at inclinations of approximately 1½:1 (horizontal to vertical) for excavations deeper than 4 feet but no more than 20 feet below existing grade. Some surficial sloughing may occur, and temporary slopes should be evaluated in the field by the project geotechnical consultant. Excavations should be performed in accordance with OSHA regulations.

Shored trenches are anticipated for the project due to anticipated trench instability and limited working area. Shoring systems should be designed for the anticipated soil conditions using the lateral earth pressure values shown on Figure 11 for braced excavations. Driven sheet piles are generally not recommended due to the very dense nature of the granular soils along the alignment and the high percentage of gravel and cobbles. Shoring alternatives such as steel trench shields and manhole boxes, hydraulic shoring, slide rail shoring system, and for deeper excavations a beam and plate shoring system, may be appropriate. Selection of the shoring system is the responsibility of the contractor.

The recommended design pressures are based on the assumption that the shoring system is constructed without raising the ground surface elevation behind the shored sidewalls of the excavation, that there are no surcharge loads, such as soil stockpiles and construction materials, and that no loads act above a 1:1 (horizontal to vertical) plane ascending from the base of the shoring system. For a shoring system subjected to the above-mentioned surcharge loads, the contractor should include the effect of these loads on the lateral earth pressures acting on the shored walls.

The selection of shoring systems and construction installation should also consider the protection of adjacent improvements. The sandy materials along the alignment have a potential for caving and shoring systems should be installed and removed such that adjacent improvements are not left unsupported.

We anticipate that settlement of the ground surface will occur behind the shored excavation. The amount of settlement depends heavily on the type of shoring system, the contractor's workmanship, and soil conditions. To reduce the potential for distress to adjacent improvements, we recommend that the shoring system be designed to limit the ground settlement behind the shoring system to ½ inch or less. Possible causes of settlement that should be addressed include settlement during installation of the shoring elements, excavation for structure construction, construction vibrations, and removal of the support system. We recommend that shoring installation be evaluated carefully by the contractor prior to construction and that ground vibration and settlement monitoring be performed during construction.

The contractor should retain a qualified and experienced engineer to design the shoring system. The shoring parameters presented in this report are minimum requirements, and the contractor should evaluate the adequacy of these parameters and make the appropriate modifications for their design. We recommend that the contractor take appropriate measures to protect workers. OSHA requirements pertaining to worker safety should be observed.

10.1.5 Excavation Bottom Stability

We anticipate the trench bottoms will expose relatively dense granular soils along the majority of the alignment and stiff to hard clayey soils in some areas. Additional overexcavation or recompaction of the pipeline subgrade is not anticipated unless the bottoms becomes significantly disturbed during excavation. If unstable trench bottoms are encountered, in general, unstable bottom conditions may be mitigated by overexcavating the excavation bottom to approximately 2 feet and replacing with gravel wrapped by geo-fabric (Mirafi 140N or equivalent). The purpose of the geofabric is to reduce the potential for migration of clayey materials into the gravel and thereby reducing the potential for creating voids due to soil migration.

10.1.6 Pipe Bedding

We recommend that new sewer pipelines be supported on 6 inches or more of granular bedding material such as sand with a sand equivalent (SE) value of 30 or more. Based on

our observations and laboratory test results, the majority of the site soils do not have an SE of 30 or more and are not considered suitable for use as bedding material.

Bedding material should be placed around the pipe, and 12 inches or more above the top of the pipe in accordance with the current “Greenbook” Standard Specifications for Public Works. Special care should be taken not to allow voids beneath and around the pipe. Bedding material and compaction requirements should be in accordance with the recommendations of this report, the project specifications, and applicable requirements of the appropriate agencies.

Special care should be taken not to allow voids beneath and around the pipe. Compaction of the bedding material and backfill should proceed along both sides of the pipe concurrently. Trench backfill, including bedding material, should be placed and compacted with mechanical equipment in accordance with the recommendations presented in the Earthwork section of this report.

10.1.7 Fill Material

In general, the on-site soils should be suitable for re-use as trench backfill. Fill material should be free of oversize rocks, debris, roots, vegetation, or other deleterious materials. Wet soils should be processed to a moisture content that is slightly above the laboratory optimum moisture and suitable for compaction. Oversize material larger than about 4 inches in diameter should be broken into smaller pieces or should be removed from the site. Materials for use as backfill should be evaluated by Ninyo & Moore prior to compaction.

On-site soils used for fill may involve moisture conditioning to achieve appropriate moisture content for compaction. Some of the clayey soils have high moisture contents and should be allowed to dry to a near-optimum moisture content prior to their placement as trench backfill.

Imported fill material, if used, should also consist of clean, granular material with a low expansion potential, corresponding to an expansion index of 50 or less. The soil should also be tested for corrosive properties prior to importing. We recommend that the imported materials satisfy the Caltrans (2021) criteria for non-corrosive soils (i.e., soils having a chloride concentration of 500 ppm or less, a soluble sulfate content of approximately 0.15 percent (1,500 ppm) or less, a pH value of 5.5 or higher, or an electrical resistivity of 1,500 ohm-centimeters or more). Materials for use as fill should be evaluated by Ninyo & Moore prior to importing. The contractor should be responsible for the uniformity of import material brought to the site.

10.1.8 Trench Backfill Placement and Compaction

Trench backfill should be compacted in horizontal lifts to a relative compaction of 90 percent or more as evaluated by ASTM International (ASTM) D 1557. Fill soils should be moisture-conditioned to two percent or more above the optimum moisture content. The optimum lift thickness of fill will depend on the type of compaction equipment used but generally should not exceed 8 inches in loose thickness. Special care should be taken to avoid pipe damage when compacting trench backfill above pipes. Placement and compaction of the fill soils should be in general accordance with appropriate governing agency standards and good construction practice.

10.1.9 Modulus of Soil Reaction

The modulus of soil reaction is used to characterize the stiffness of soil backfill placed along the sides of buried flexible pipelines for the purpose of evaluating deflection caused by the weight of the backfill above the pipe. We recommend that a modulus of soil reaction of 1,000 pounds per square inch be used for design, provided that granular bedding material or concrete slurry be placed adjacent to the pipe, as recommended in the previous section.

10.2 Corrosivity

Laboratory testing was performed on a representative soil sample to evaluate pH, electrical resistivity, water-soluble chloride content, and water-soluble sulfate content. The soil pH and electrical resistivity tests were performed in general accordance with California Test Method (CT) 643. Chloride content testing was performed in general accordance with CT 422. Sulfate content testing was performed in general accordance with CT 417. The laboratory test results are presented in Appendix B.

The results of our corrosivity testing indicated a pH level ranging from 7.5 to 8.0, an electrical resistivity ranging from 596 to 1,424 ohm-centimeters, chloride content ranging from approximately 45 to 115 ppm, and sulfate content ranging from approximately 30 to 50 ppm (0.003 to .005 percent). Based on the laboratory test results and Caltrans corrosion criteria (2021), the project site can be classified as a corrosive site. Caltrans currently considers a site to be corrosive to foundation elements if the minimum electrical resistivity is less than or equal to 1,500 ohm-cm, chloride concentration is greater than or equal to 500 ppm, sulfate concentration is greater than or equal to 1,500 ppm, or the pH is 5.5 or less.

10.3 Concrete

Concrete in contact with soil or water that contains high concentrations of water-soluble sulfates can be subject to premature chemical and/or physical deterioration. The potential for sulfate attack is negligible for water-soluble sulfate contents in soil ranging from 0.00 to 0.10 percent by weight, moderate for water-soluble sulfate contents ranging from 0.10 to 0.20 percent by weight, severe for water-soluble sulfate contents ranging from 0.20 to 2.00 percent by weight, and very severe for water-soluble sulfate contents over 2.00 percent by weight. The soil samples tested for this evaluation, using Caltrans Test Method 417, indicate a water-soluble sulfate content of approximately 0.003 to 0.005 percent by weight (i.e., 30-50 ppm). Accordingly, the on-site soils are considered to have a negligible potential for sulfate attack. However, due to the potential variability of the on-site soils, consideration should be given to using Type II/V cement for the project.

In order to reduce the potential for shrinkage cracks in the concrete during curing, we recommend that the concrete for the proposed improvements, if applicable, be placed with a slump of 4 inches based on ASTM C 143. The slump should be checked periodically at the site prior to concrete placement. We further recommend that concrete cover over reinforcing steel for foundations be provided in accordance with CBC (2019). The structural engineer should be consulted for additional concrete specifications.

10.4 Pavement Reconstruction

Trenching within the street right-of-way will result in the replacement of pavement for the project. In general, pavement repair should conform to the material and compaction requirements of the adjacent pavement sections. AB material should conform to the latest specifications in Section 200-2.2 for crushed AB or Section 200-2.4 for crushed miscellaneous base of the Greenbook and should be compacted to a relative compaction of 95 percent in accordance with ASTM D 1557. AC should conform to Section 2036 of the Greenbook and should be compacted to a relative compaction of 95 percent in accordance with ASTM D 1560 or CT 304. Actual pavement reconstruction should conform to the requirements of the appropriate governing agency.

11 CONSTRUCTION MONITORING PROGRAM

We recommend that pre-construction condition surveys be performed on structures and improvements within approximately 50 feet of the proposed excavations prior to construction. This survey should include locating existing cracks and measuring widths of cracks, in combination with videotape documentation of existing conditions. In addition, interviews should be conducted

with utility owners so that existing knowledge about the age, type, and maintenance history of affected utilities is available prior to construction.

11.1 Construction Vibrations

People can perceive vibrations from construction activities at significantly lower levels than might cause cosmetic damage to structures. Jones & Stokes (2004) indicate that transient vibrations, such as from pile driving or construction activities, may be noticeable, and therefore may result in complaints, at peak particle velocities as low as 0.02 to 0.06 inch per second (ips). The vibrations may be disturbing and result in complaints and/or damage claims at peak particle velocities as low as 0.2 to 0.4 ips. However, these vibration levels are well below the level considered to cause cosmetic damage to residential construction.

There is also the possibility of settlement of the soil during construction activities due to vibrations. This settlement may result in damage to structures. If the construction vibrations can be maintained below a peak particle velocity of 0.2 ips, it is anticipated the settlement can be limited to acceptable levels based on past projects in similar conditions.

For the above stated reasons, we recommend that seismographs be used in the early stages of construction to monitor the vibrations. Seismographs should be located near structures and improvements next to the construction activities. Additional seismographs should be located at various structures and improvements farther from construction activities to monitor vibrations as a function of distance from the sites. Periodic vibration monitoring is recommended during other construction activities. After review of the data obtained, the number of seismographs may be reduced at the discretion of the client and the geotechnical consultant.

11.2 Ground Surface Settlement

We recommend that arrays of ground surface settlement points be installed around the proposed excavations. The contractor should submit a monitoring plan showing the proposed locations of settlement points for review and approval by the project engineer. We recommend that the contractor be responsible for maintaining total settlement at any survey point to less than ½ inch. If the settlements reach this limit, we recommend that a further review of construction methodologies be performed and appropriate changes be made.

11.3 Lateral Movement for Shoring Support System

We recommend that survey points be established behind excavations located in areas where existing structures are located above a 1:1 (horizontal to vertical) plane projected from the bottom

of the proposed excavations to the ground surface. The survey points should be monitored and evaluated daily during excavation activities to provide an advanced warning system of potential problems. As discussed previously, we recommend that the shoring system be designed to limit the ground settlement behind the shoring system to ½ inch or less to reduce the potential for distress to adjacent structures and improvements. If settlement values reach ¼ inch, we recommend that a review of the contractor's methods be performed and appropriate changes be made, if needed

11.4 Hazardous Materials

Based on the findings from the analytical testing performed on the soils that will be encountered during the construction activities in the vicinity of borings B-8, 9, and 10, Ninyo & Moore recommends that the construction contractor follow standard industry practices for the protection of the health and safety of workers, including wearing appropriate personal protective equipment (PPE), and not eating, drinking or smoking onsite during construction activities. If unforeseen conditions or stained, odorous, or discolored soil is encountered during excavation activities, work should be stopped immediately until further assessment is performed to evaluate the extent and level of contamination.

12 CONSTRUCTION OBSERVATION

The recommendations provided in this report are based on our understanding of the proposed project and our evaluation of the data collected based on subsurface conditions disclosed by widely spaced exploratory borings. It is imperative that the geotechnical consultant checks the interpolated subsurface conditions during construction. We recommend that Ninyo & Moore review the project plans and specifications prior to construction. It should be noted that, upon review of these documents, some recommendations presented in this report may be revised or modified.

During construction we recommend that the duties of the geotechnical consultant include, but not be limited to:

- Observing trench excavation bottoms for suitability to support the new pipelines,
- Observation and testing during the placement and compaction of trench backfill.
- Evaluating imported materials, if any, prior to their use as fill.

The recommendations provided in this report assume that Ninyo & Moore will be retained as the geotechnical consultant during the construction phase of this project. If another geotechnical consultant is selected, we request that the selected consultant indicate to the owner and to our

firm in writing that our recommendations are understood and that they are in full agreement with our recommendations.

13 LIMITATIONS

The geotechnical analyses presented in this geotechnical report have been conducted in general accordance with current practice and the standard of care exercised by geotechnical consultants performing similar tasks in the project area and are based on existing data collected by other consultants. No warranty, expressed or implied, is made regarding the conclusions, recommendations, and opinions presented in this report. There is no evaluation detailed enough to reveal every subsurface condition. Variations may exist and conditions not observed or described in this report may be encountered during construction. Uncertainties relative to subsurface conditions can be reduced through additional subsurface exploration. Additional subsurface evaluation will be performed upon request. Please note that our evaluation was limited to assessment of the geotechnical aspects of the project, and did not include evaluation of environmental concerns or the presence of hazardous materials.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document.

Our conclusions and recommendations are based on an analysis of the observed site conditions and review of existing geotechnical reports prepared by other geotechnical firms. If geotechnical conditions different from those described in this report are encountered, our office should be notified and additional recommendations, if warranted, will be provided upon request. In the event of any changes in the nature, design, or locations of the proposed improvements, the conclusions and recommendations presented herein may not be valid unless the changes are evaluated by Ninyo & Moore and the conclusions of this report are modified in writing. It should be understood that the conditions of a site can change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

14 REFERENCES

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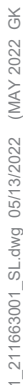
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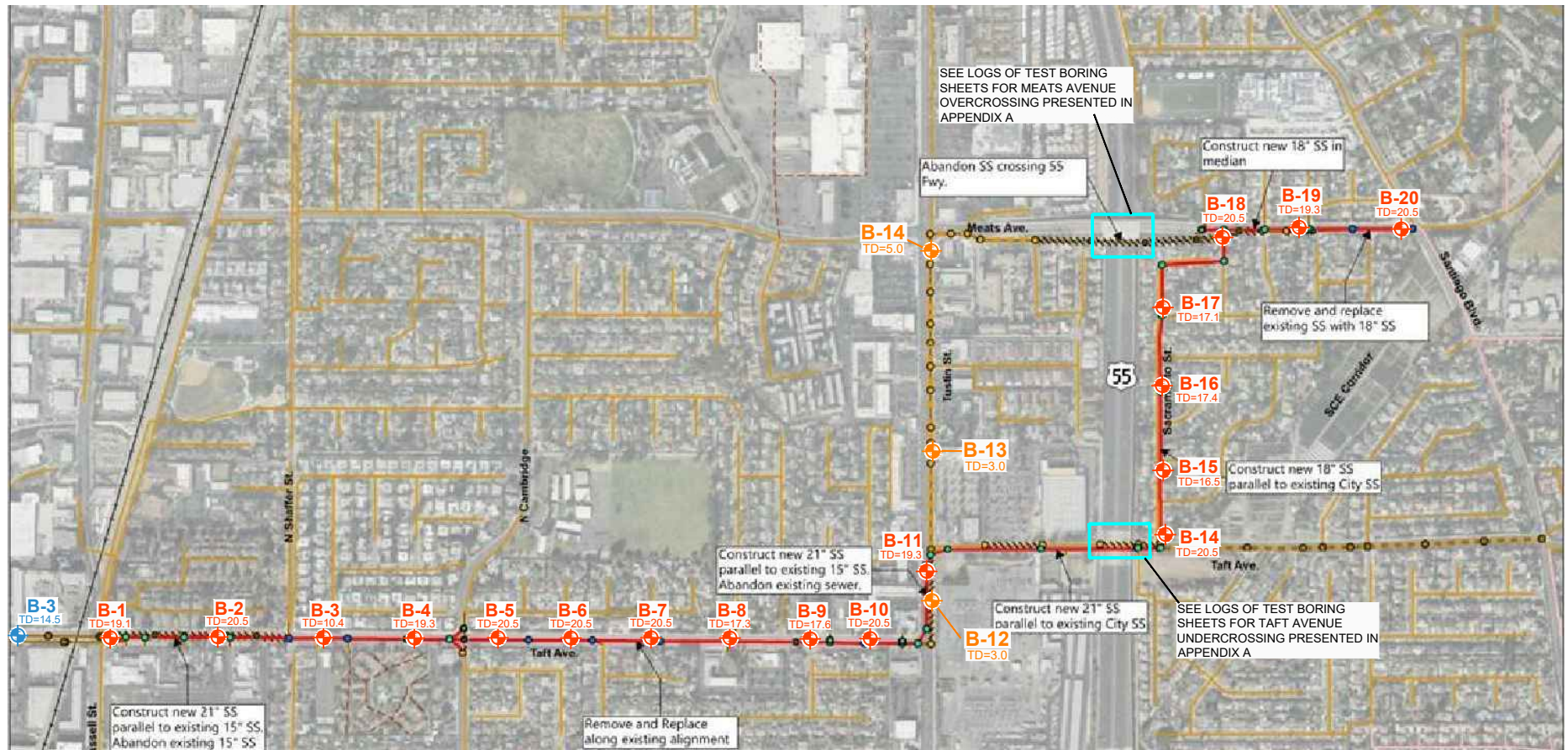
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FIGURES





LEGEND

- | | | | |
|--------------------------------------|--------------------------------|--|--|
| Proj 2-49 Alignment Segment #s | Local Sewer (Private) | Existing (or transferred to) City MH | Proposed Boring Locations (This Study)
TD=Total Depth in Feet |
| Local/Service SS (to be reconnected) | Transfer to OC San | Abandon Existing Manhole | |
| Existing OC San Sewer | Abandon Sewer | Railroad | Boring; (County of Orange, 1965a)
TD=Total Depth in Feet |
| Transfer to City | Remove and Replace Manh | Boring; (County Sanitation Districts No. 2 of Orange County, 1985)
TD=Total Depth in Feet | |
| Local Sewer (City of Orange) | New Manhole | | |
| Local Sewer (City of Villa Park) | Existing (or transferred to) O | | |

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. | REFERENCE: WOODARD & CURRAN, 2022.

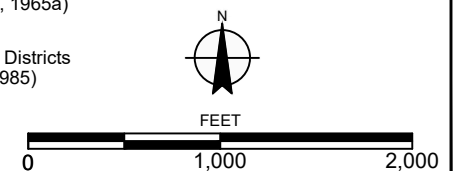
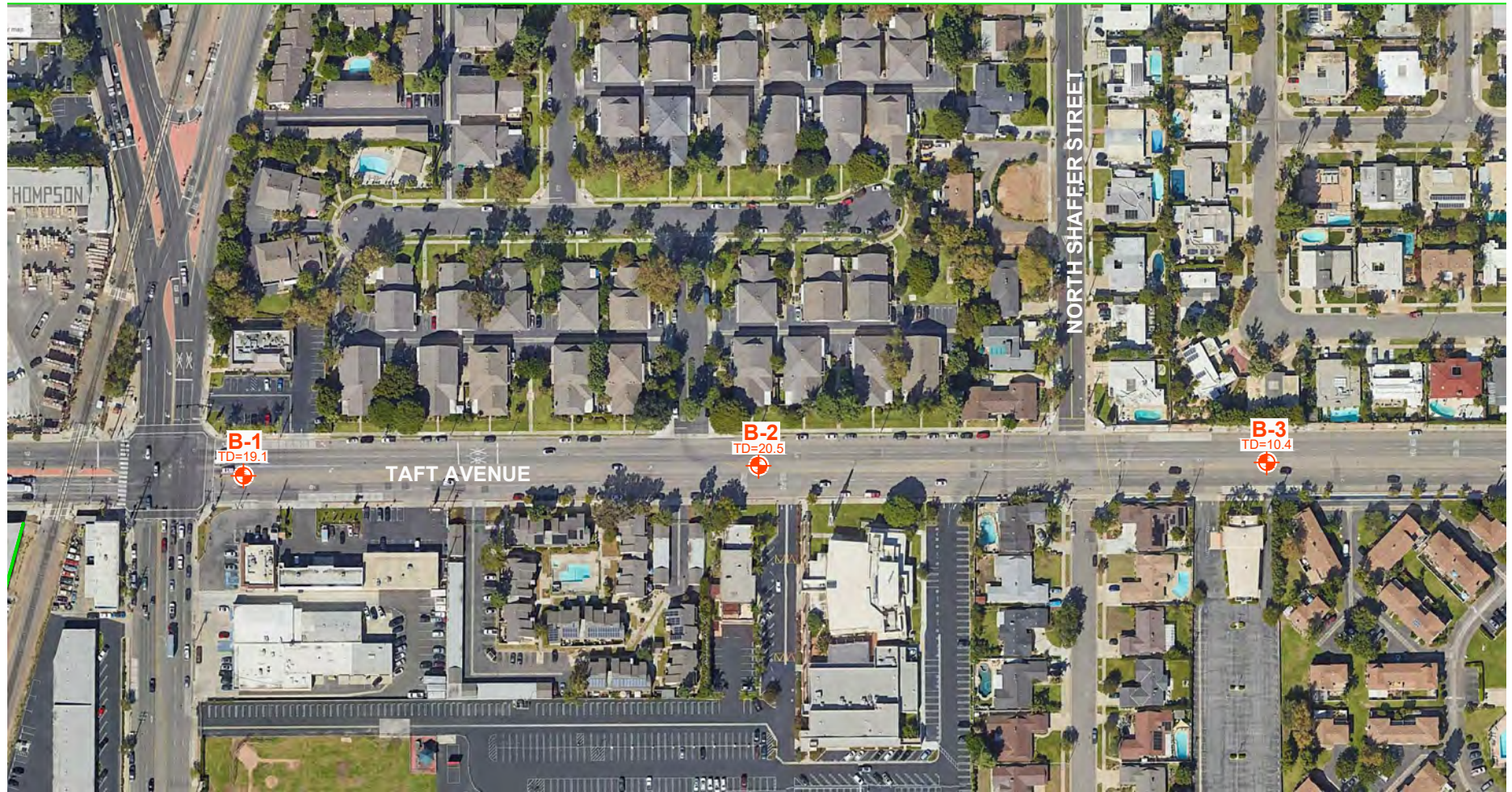


FIGURE 2



LEGEND

B-3
TD=10.4

Boring;
TD=Total Depth in Feet

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. | REFERENCE: GOOGLE EARTH, 2022.

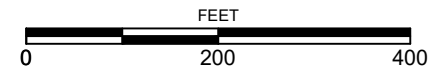
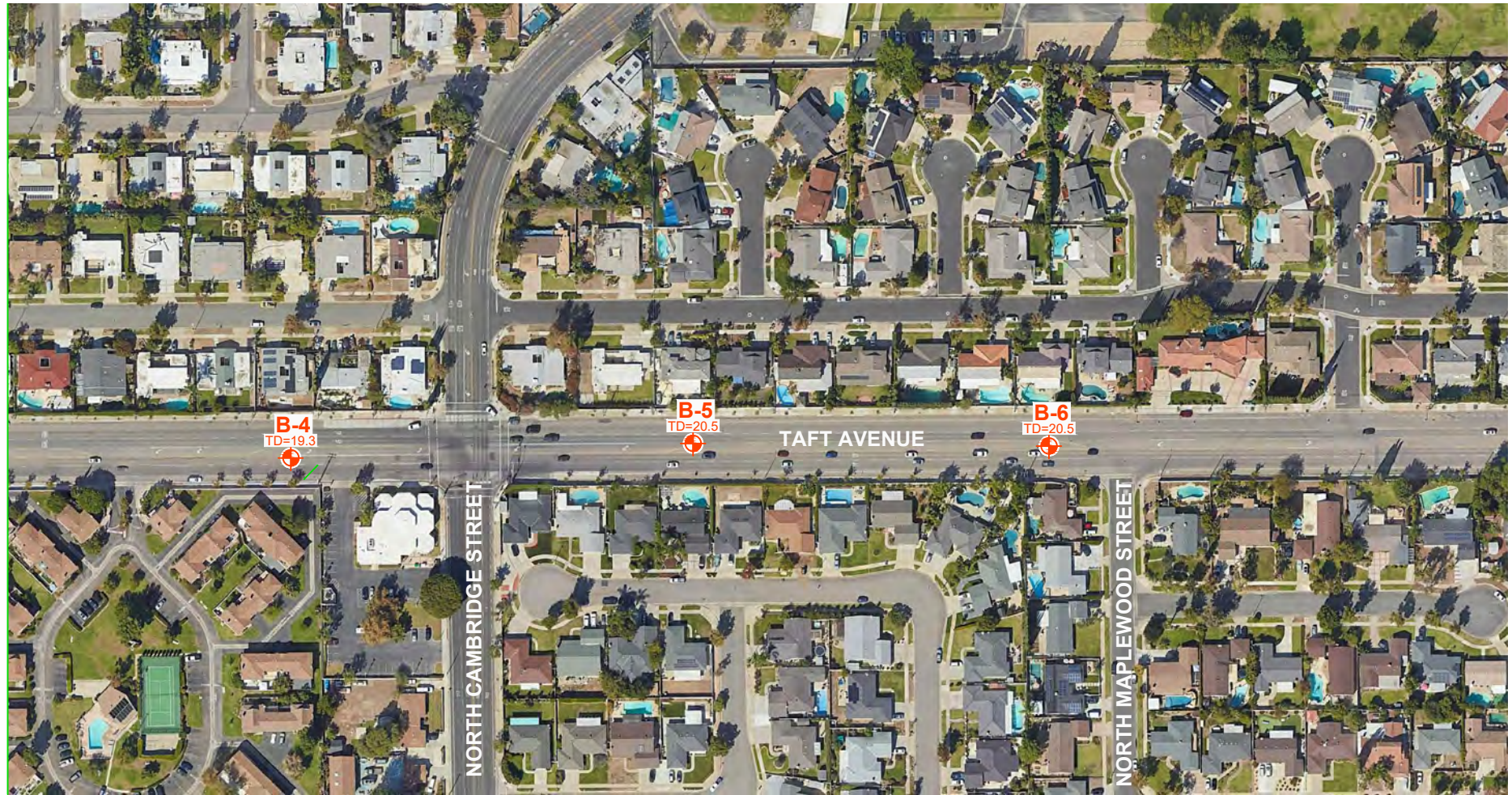



FIGURE 3



LEGEND

B-6  Boring;
TD=20.5 TD=Total Depth in Feet

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. | REFERENCE: GOOGLE EARTH, 2022.

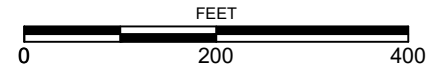
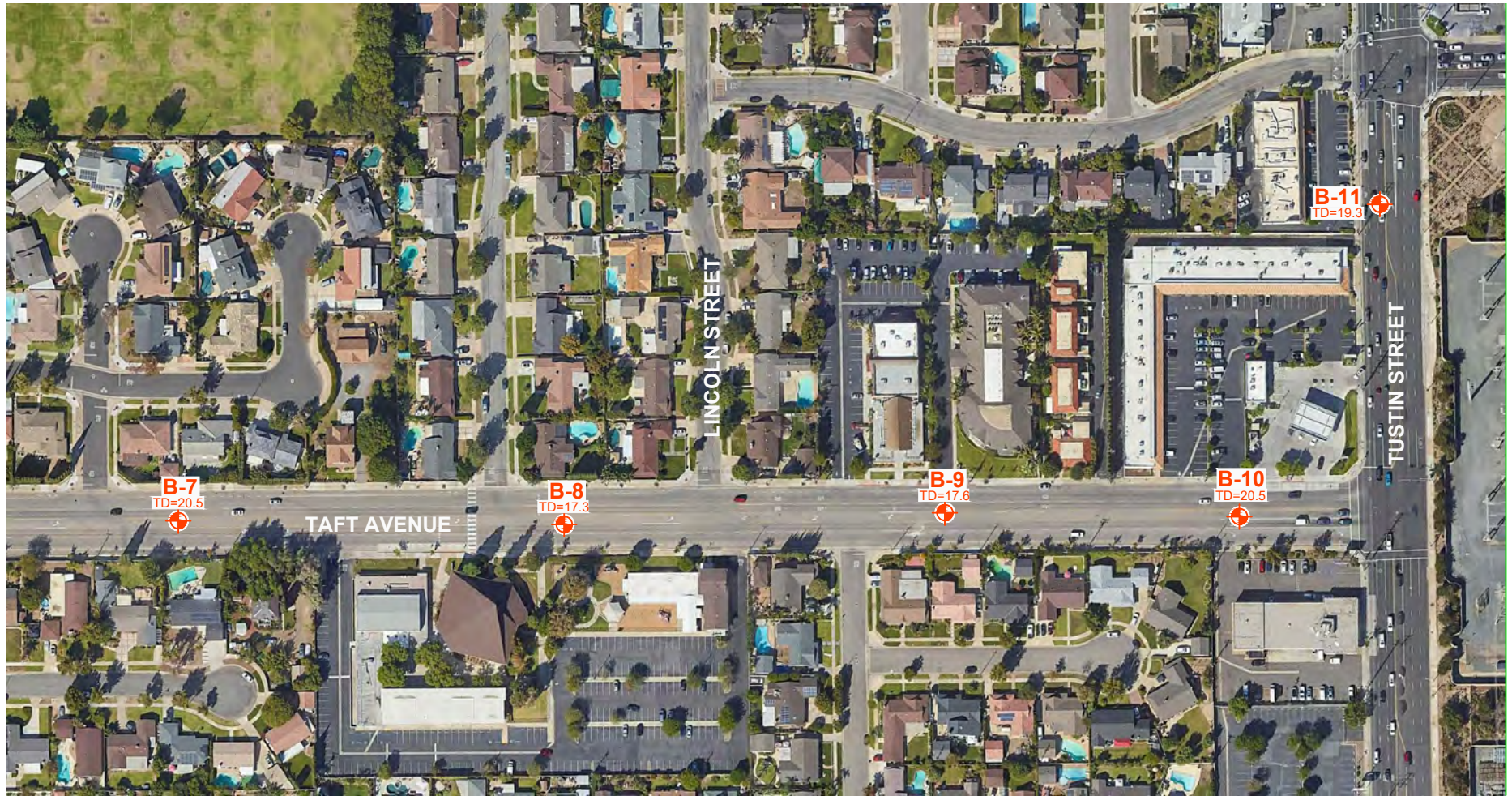


FIGURE 4



LEGEND

B-11 Boring;
TD=19.3 TD=Total Depth in Feet

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. | REFERENCE: GOOGLE EARTH, 2022.

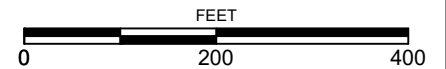


FIGURE 5



LEGEND

B-17
TD=17.1



Boring;
TD=Total Depth in Feet

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. | REFERENCE: GOOGLE EARTH, 2022.

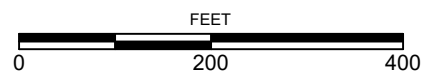
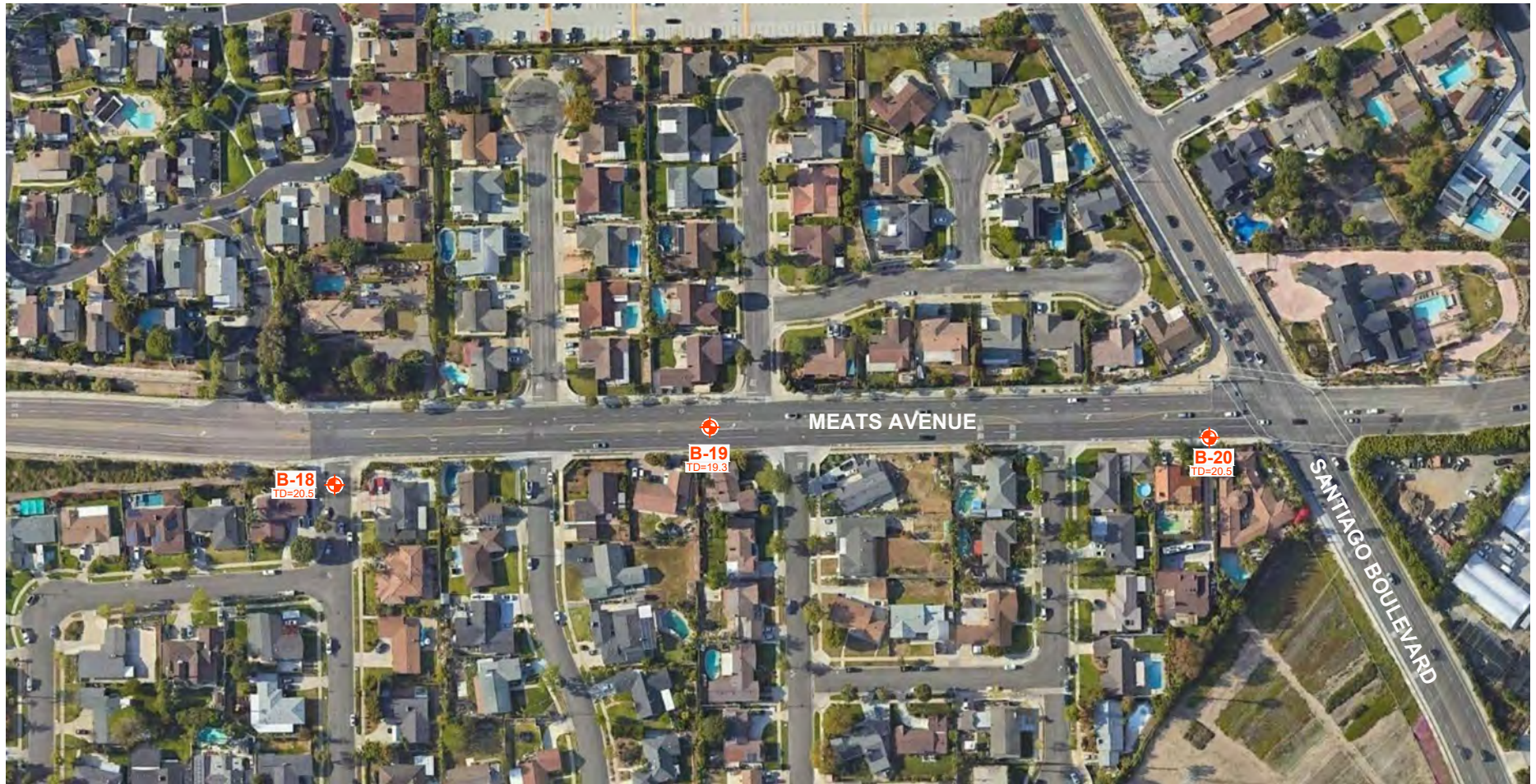


FIGURE 6

BORING LOCATIONS

TAFT BRANCH IMPROVEMENTS PROJECT
ORANGE COUNTY SANITATION DISTRICT
ORANGE, CALIFORNIA
211663001 | 6/23



LEGEND

B-20
TD=20.5



Boring;
TD=Total Depth in Feet

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. | REFERENCE: GOOGLE EARTH, 2022.

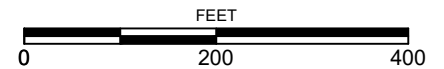
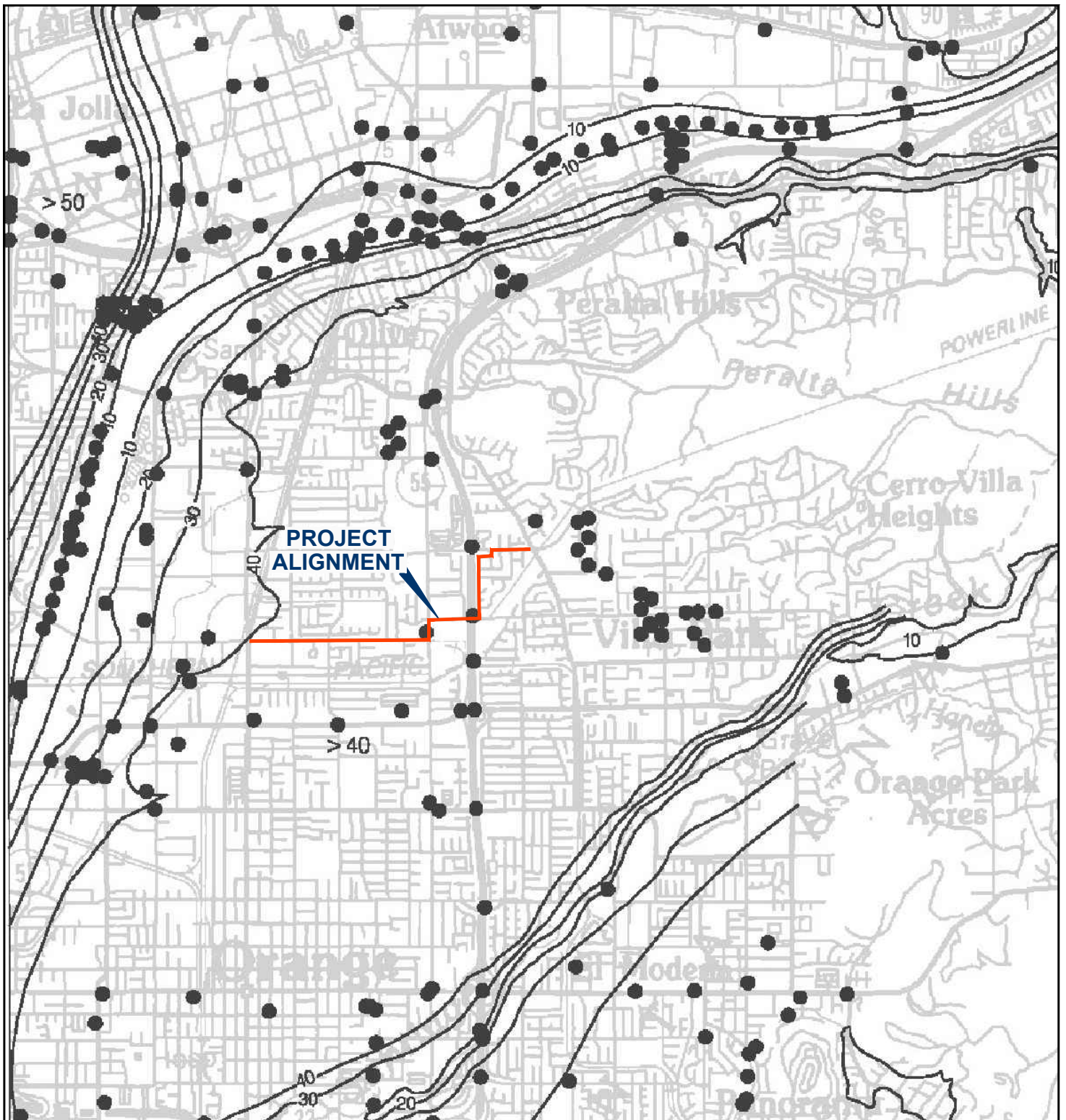


FIGURE 7



NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. | REFERENCE: CDMG, 1997.

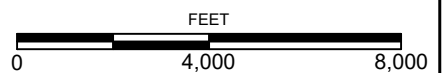
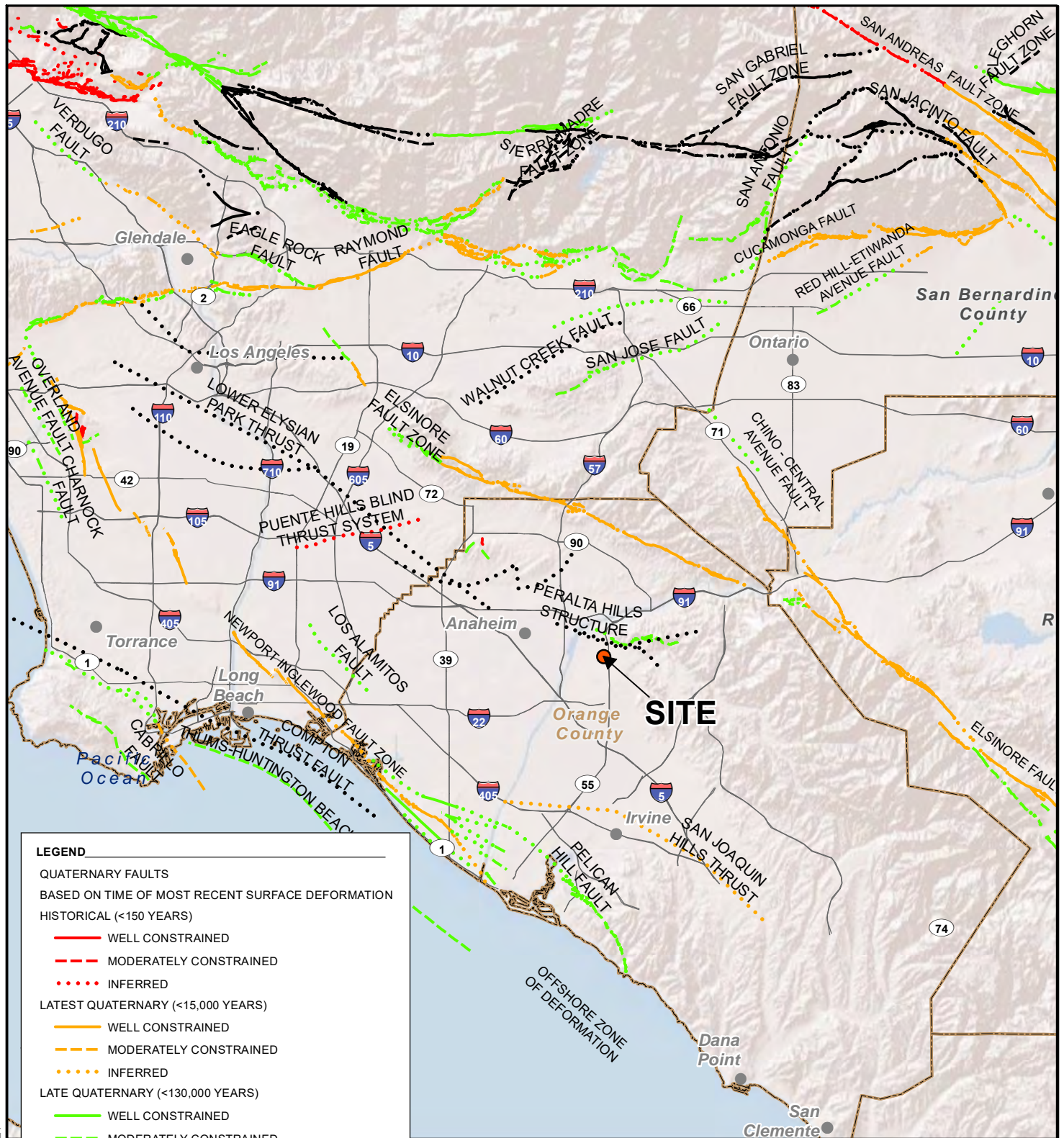


FIGURE 9



SOURCES: CALIFORNIA GEOLOGICAL SURVEY, ACCESSED MAY 12, 2022, AT: <https://www.usgs.gov/natural-hazards/earthquake-hazards/faults>; ESRI, 2021.



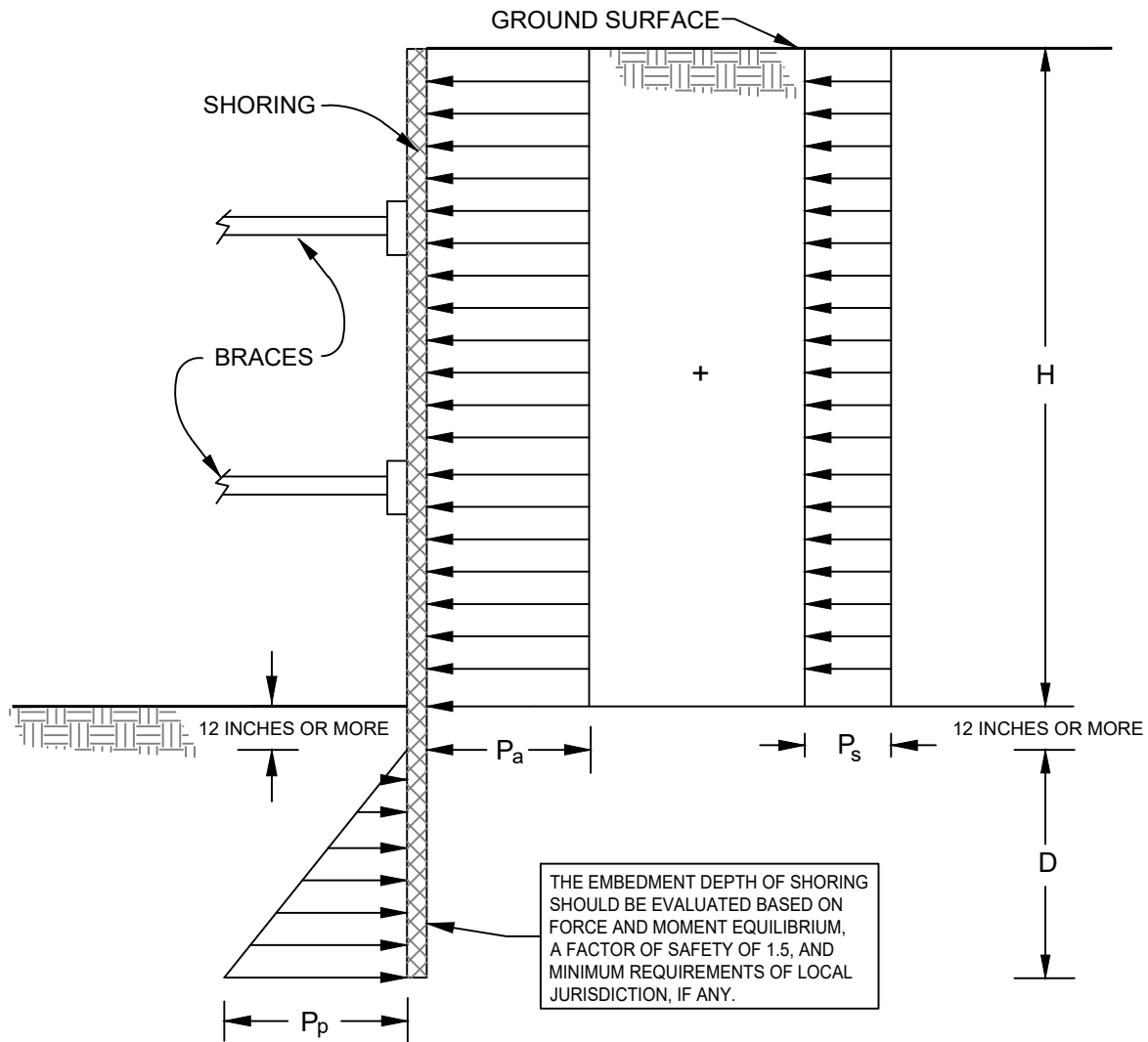
NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

FIGURE 10

FAULT LOCATIONS

Taft Branch Improvements Project
Orange County Sanitation District
Orange, California

211663001 | 6/23



NOTES:

1. APPARENT LATERAL EARTH PRESSURE, P_a
 $P_a = 24H$ psf
2. CONSTRUCTION TRAFFIC INDUCED SURCHARGE PRESSURE, P_s
 $P_s = 120$ psf
3. PASSIVE LATERAL EARTH PRESSURE, P_p
 $P_p = 300D$ psf
4. ASSUMES GROUNDWATER IS NOT PRESENT
5. SURCHARGES FROM EXCAVATED SOIL OR CONSTRUCTION MATERIALS ARE NOT INCLUDED
6. H AND D ARE IN FEET

NOT TO SCALE

FIGURE 11

**LATERAL EARTH PRESSURES FOR
BRACED EXCAVATION (GRANULAR SOIL)**

Taft Branch Improvements Project
Orange County Sanitation District
Orange, California
211663001 | 6/23



APPENDIX A

Boring Logs

APPENDIX A

BORING LOGS

Field Procedure for the Collection of Disturbed Samples

Disturbed soil samples were obtained in the field using the following method.

Bulk Samples

Bulk samples of representative earth materials were obtained from the exploratory borings. The samples were bagged and transported to the laboratory for testing.

The Standard Penetration Test (SPT) Sampler

Disturbed drive samples of earth materials were obtained by means of a Standard Penetration Test sampler. The sampler is composed of a split barrel with an external diameter of 2 inches and an unlined internal diameter of $1\frac{3}{8}$ inches. The sampler was driven into the ground 12 to 18 inches with a 140-pound hammer falling freely from a height of 30 inches in general accordance with ASTM D 1586. The blow counts were recorded for every 6 inches of penetration; the blow counts reported on the logs are those for the last 12 inches of penetration. Soil samples were observed and removed from the sampler, bagged, sealed and transported to the laboratory for testing.

Field Procedure for the Collection of Relatively Undisturbed Samples

Relatively undisturbed soil samples were obtained in the field using the following method.

The Modified Split-Barrel Drive Sampler

The sampler, with an external diameter of 3 inches, was lined with 1-inch-long, thin brass rings with inside diameters of approximately 2.4 inches. The sampler barrel was driven into the ground with the weight of a 140-pound hammer mounted on the drill rig in general accordance with ASTM D 3550. The driving weight was permitted to fall freely. The approximate length of the fall, the weight of the hammer or bar, and the number of blows per foot of driving are presented on the boring logs as an index to the relative resistance of the materials sampled. The samples were removed from the sampler barrel in the brass rings, sealed, and transported to the laboratory for testing.

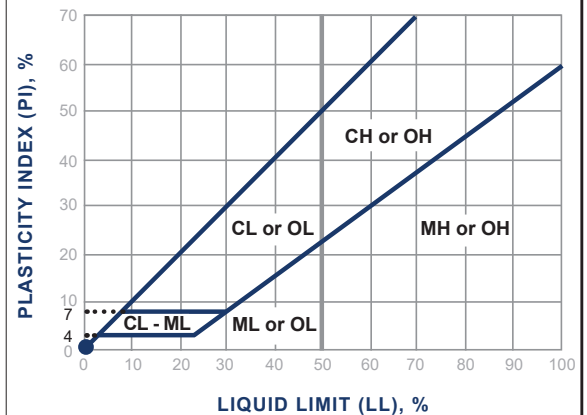
Soil Classification Chart Per ASTM D 2488

Primary Divisions			Secondary Divisions	
			Group Symbol	Group Name
COARSE-GRAINED SOILS more than 50% retained on No. 200 sieve	GRAVEL more than 50% of coarse fraction retained on No. 4 sieve	CLEAN GRAVEL less than 5% fines	GW	well-graded GRAVEL
			GP	poorly graded GRAVEL
		GRAVEL with DUAL CLASSIFICATIONS 5% to 12% fines	GW-GM	well-graded GRAVEL with silt
			GP-GM	poorly graded GRAVEL with silt
			GW-GC	well-graded GRAVEL with clay
			GP-GC	poorly graded GRAVEL with clay
		GRAVEL with FINES more than 12% fines	GM	silty GRAVEL
			GC	clayey GRAVEL
			GC-GM	silty, clayey GRAVEL
	SAND 50% or more of coarse fraction passes No. 4 sieve	CLEAN SAND less than 5% fines	SW	well-graded SAND
			SP	poorly graded SAND
		SAND with DUAL CLASSIFICATIONS 5% to 12% fines	SW-SM	well-graded SAND with silt
			SP-SM	poorly graded SAND with silt
			SW-SC	well-graded SAND with clay
			SP-SC	poorly graded SAND with clay
		SAND with FINES more than 12% fines	SM	silty SAND
			SC	clayey SAND
			SC-SM	silty, clayey SAND
FINE-GRAINED SOILS 50% or more passes No. 200 sieve	SILT and CLAY liquid limit less than 50%	INORGANIC	CL	lean CLAY
			ML	SILT
			CL-ML	silty CLAY
		ORGANIC	OL (PI > 4)	organic CLAY
			OL (PI < 4)	organic SILT
	SILT and CLAY liquid limit 50% or more	INORGANIC	CH	fat CLAY
			MH	elastic SILT
			OH (plots on or above "A"-line)	organic CLAY
		ORGANIC	OH (plots below "A"-line)	organic SILT
			PT	Peat

Grain Size

Description		Sieve Size	Grain Size	Approximate Size
Boulders		> 12"	> 12"	Larger than basketball-sized
Cobbles		3 - 12"	3 - 12"	Fist-sized to basketball-sized
Gravel	Coarse	3/4 - 3"	3/4 - 3"	Thumb-sized to fist-sized
	Fine	#4 - 3/4"	0.19 - 0.75"	Pea-sized to thumb-sized
Sand	Coarse	#10 - #4	0.075 - 0.19"	Rock-salt-sized to pea-sized
	Medium	#40 - #10	0.017 - 0.075"	Sugar-sized to rock-salt-sized
	Fine	#200 - #40	0.0029 - 0.017"	Flour-sized to sugar-sized
Fines		Passing #200	< 0.0029"	Flour-sized and smaller

Plasticity Chart



Apparent Density - Coarse-Grained Soil

Apparent Density	Spooling Cable or Cathead		Automatic Trip Hammer	
	SPT (blows/foot)	Modified Split Barrel (blows/foot)	SPT (blows/foot)	Modified Split Barrel (blows/foot)
Very Loose	≤ 4	≤ 8	≤ 3	≤ 5
Loose	5 - 10	9 - 21	4 - 7	6 - 14
Medium Dense	11 - 30	22 - 63	8 - 20	15 - 42
Dense	31 - 50	64 - 105	21 - 33	43 - 70
Very Dense	> 50	> 105	> 33	> 70

Consistency - Fine-Grained Soil

Consistency	Spooling Cable or Cathead		Automatic Trip Hammer	
	SPT (blows/foot)	Modified Split Barrel (blows/foot)	SPT (blows/foot)	Modified Split Barrel (blows/foot)
Very Soft	< 2	< 3	< 1	< 2
Soft	2 - 4	3 - 5	1 - 3	2 - 3
Firm	5 - 8	6 - 10	4 - 5	4 - 6
Stiff	9 - 15	11 - 20	6 - 10	7 - 13
Very Stiff	16 - 30	21 - 39	11 - 20	14 - 26
Hard	> 30	> 39	> 20	> 26

BORING LOG EXPLANATION SHEET

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	
	Bulk	Driven						
0								<p>Bulk sample.</p> <p>Modified split-barrel drive sampler.</p> <p>No recovery with modified split-barrel drive sampler.</p> <p>Sample retained by others.</p> <p>Standard Penetration Test (SPT).</p> <p>No recovery with a SPT.</p> <p>Shelby tube sample. Distance pushed in inches/length of sample recovered in inches.</p> <p>No recovery with Shelby tube sampler.</p> <p>Continuous Push Sample.</p> <p>Seepage.</p> <p>Groundwater encountered during drilling.</p> <p>Groundwater measured after drilling.</p>
5			XX/XX					
10								
15							SM	<p>MAJOR MATERIAL TYPE (SOIL):</p> <p>Solid line denotes unit change.</p>
							CL	<p>Dashed line denotes material change.</p> <p>Attitudes: Strike/Dip</p> <p>b: Bedding</p> <p>c: Contact</p> <p>j: Joint</p> <p>f: Fracture</p> <p>F: Fault</p> <p>cs: Clay Seam</p> <p>s: Shear</p> <p>bss: Basal Slide Surface</p> <p>sf: Shear Fracture</p> <p>sz: Shear Zone</p> <p>sbs: Shear Bedding Surface</p>
20								<p>The total depth line is a solid line that is drawn at the bottom of the boring.</p>

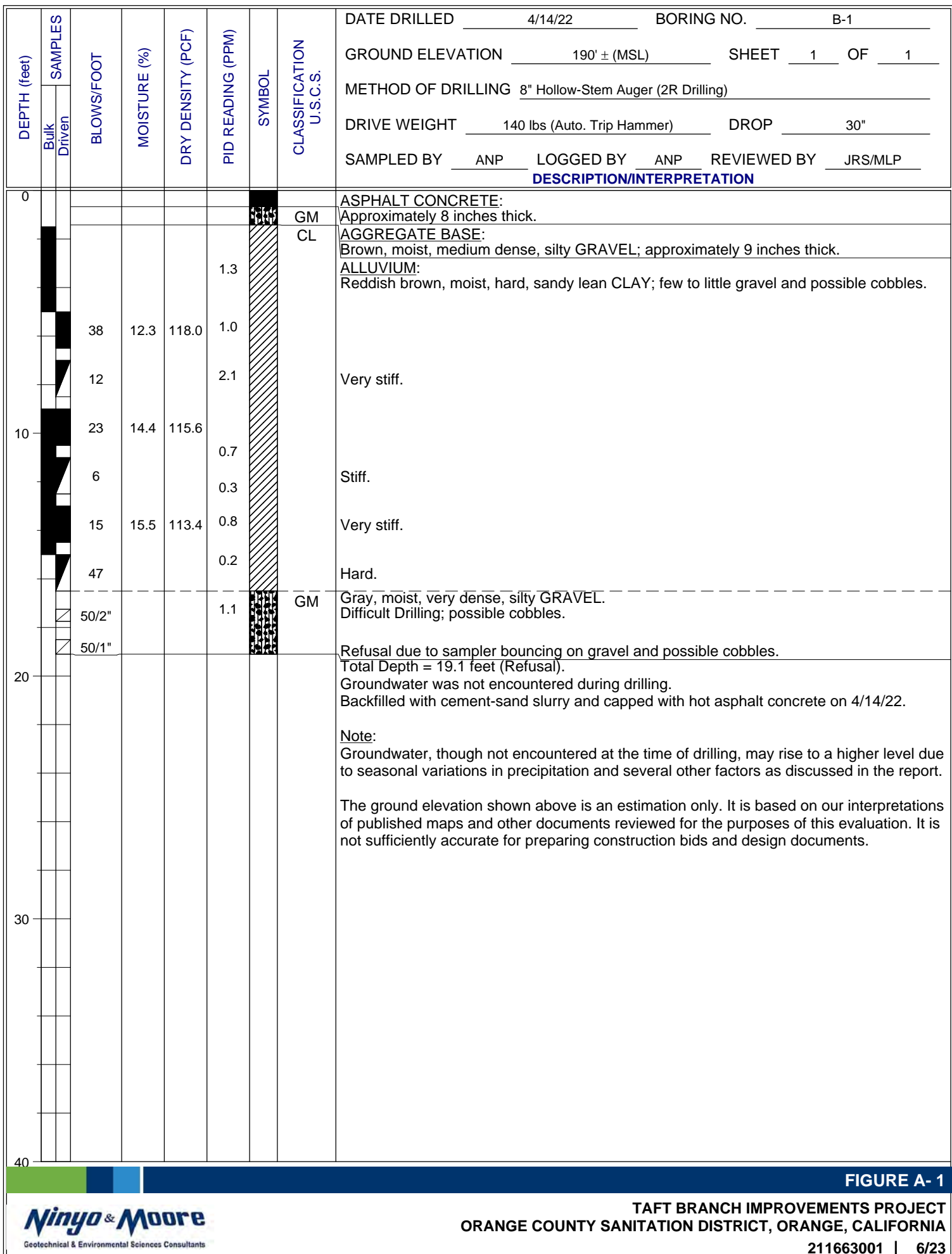


FIGURE A- 1

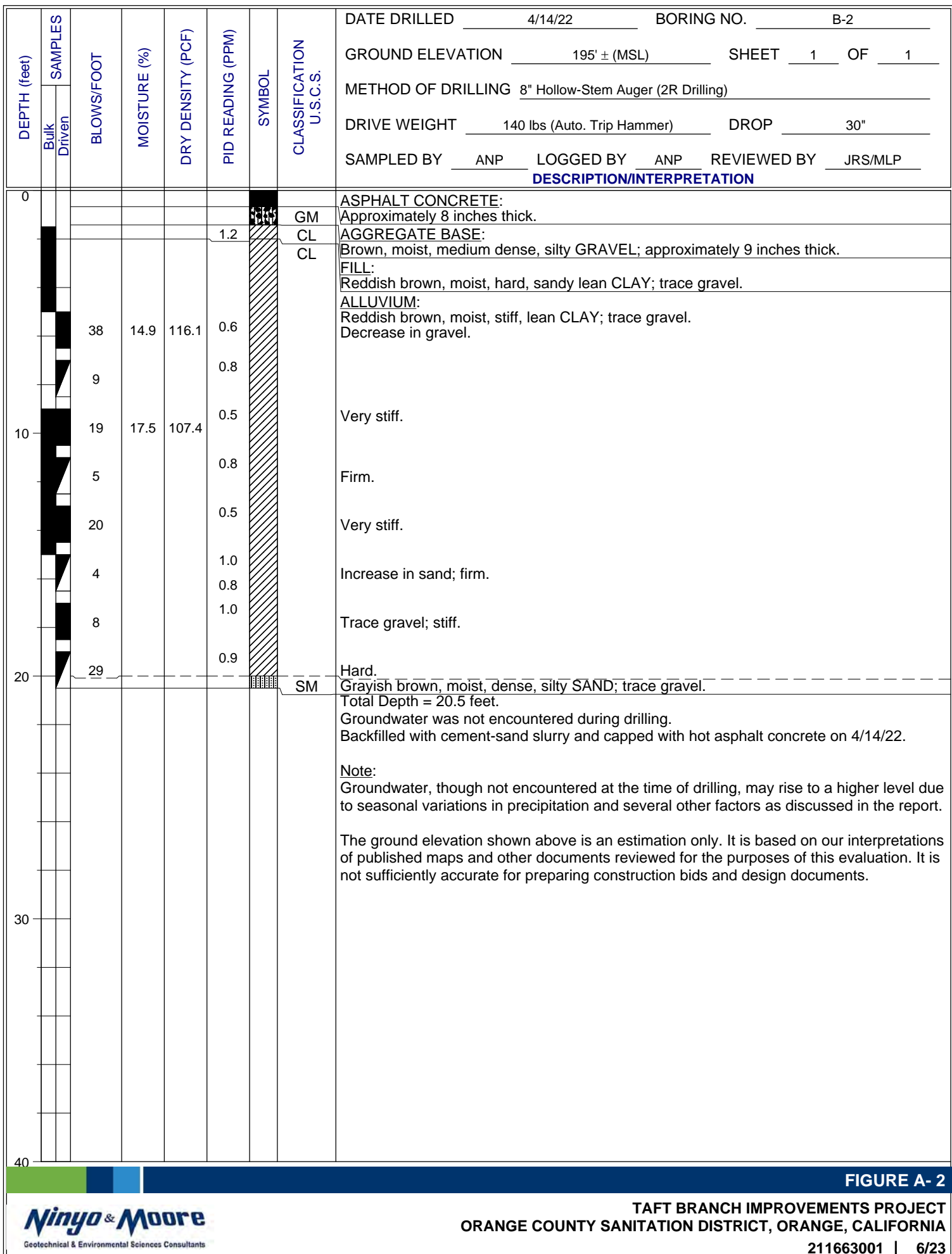


FIGURE A- 2

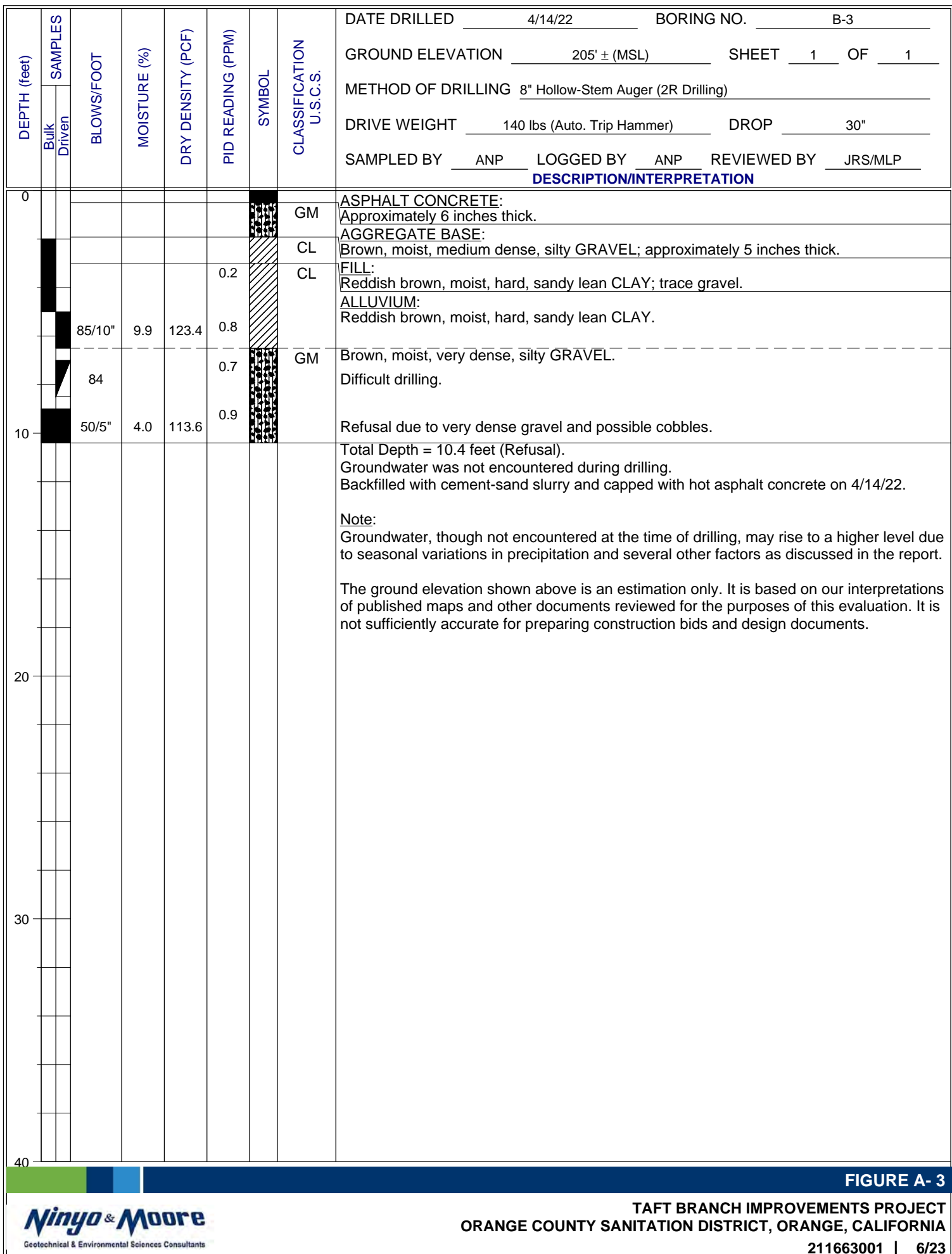


FIGURE A- 3

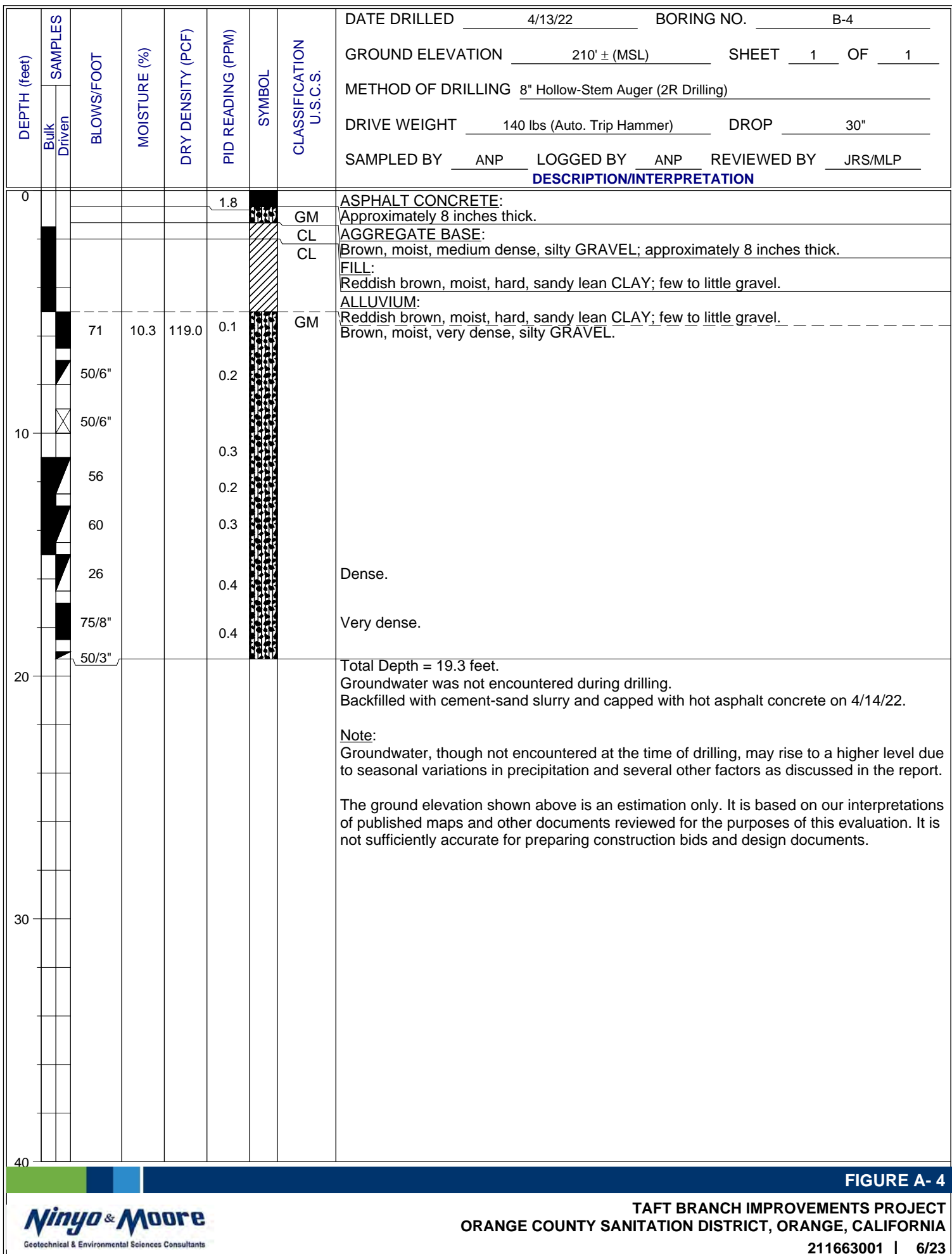


FIGURE A- 4

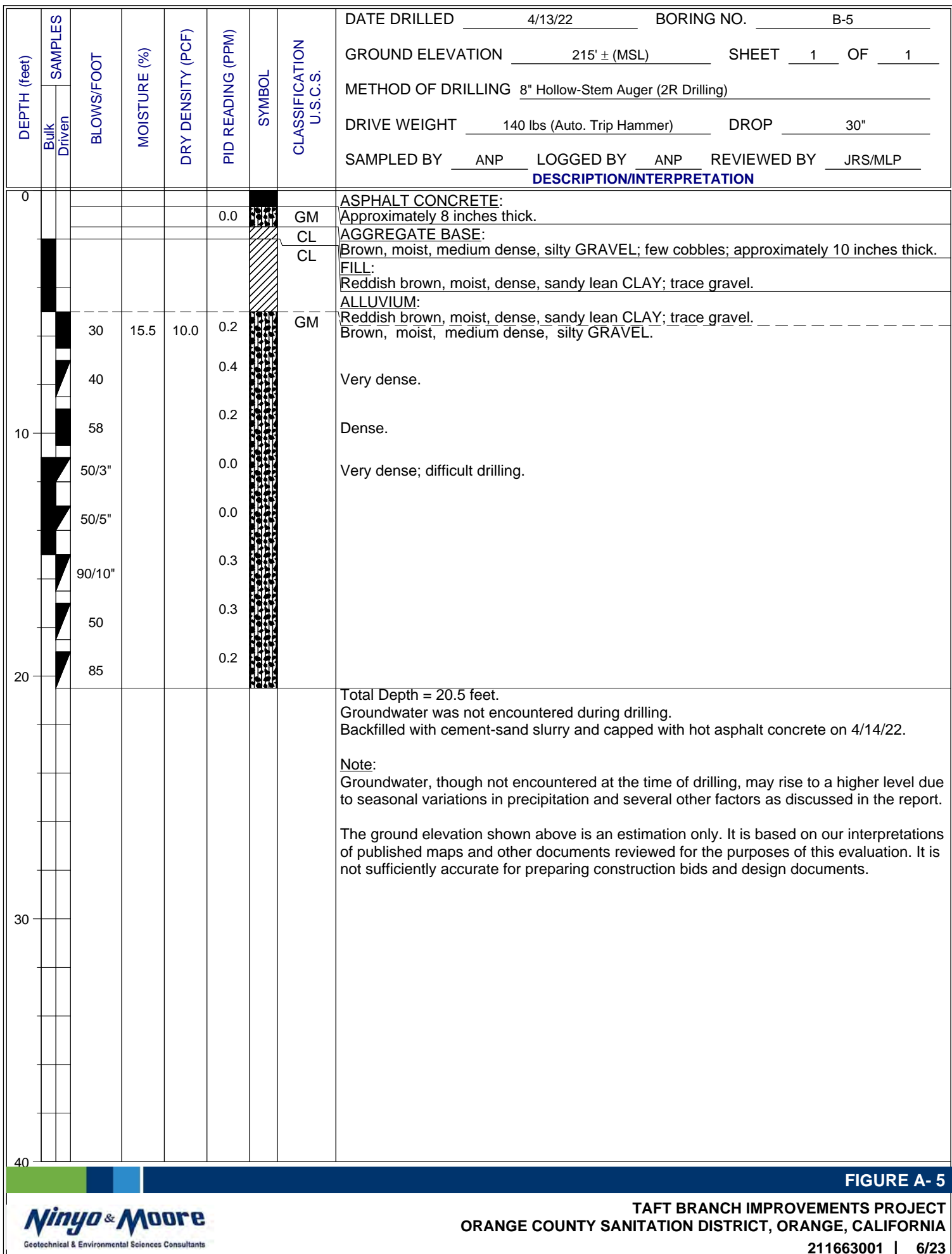


FIGURE A- 5

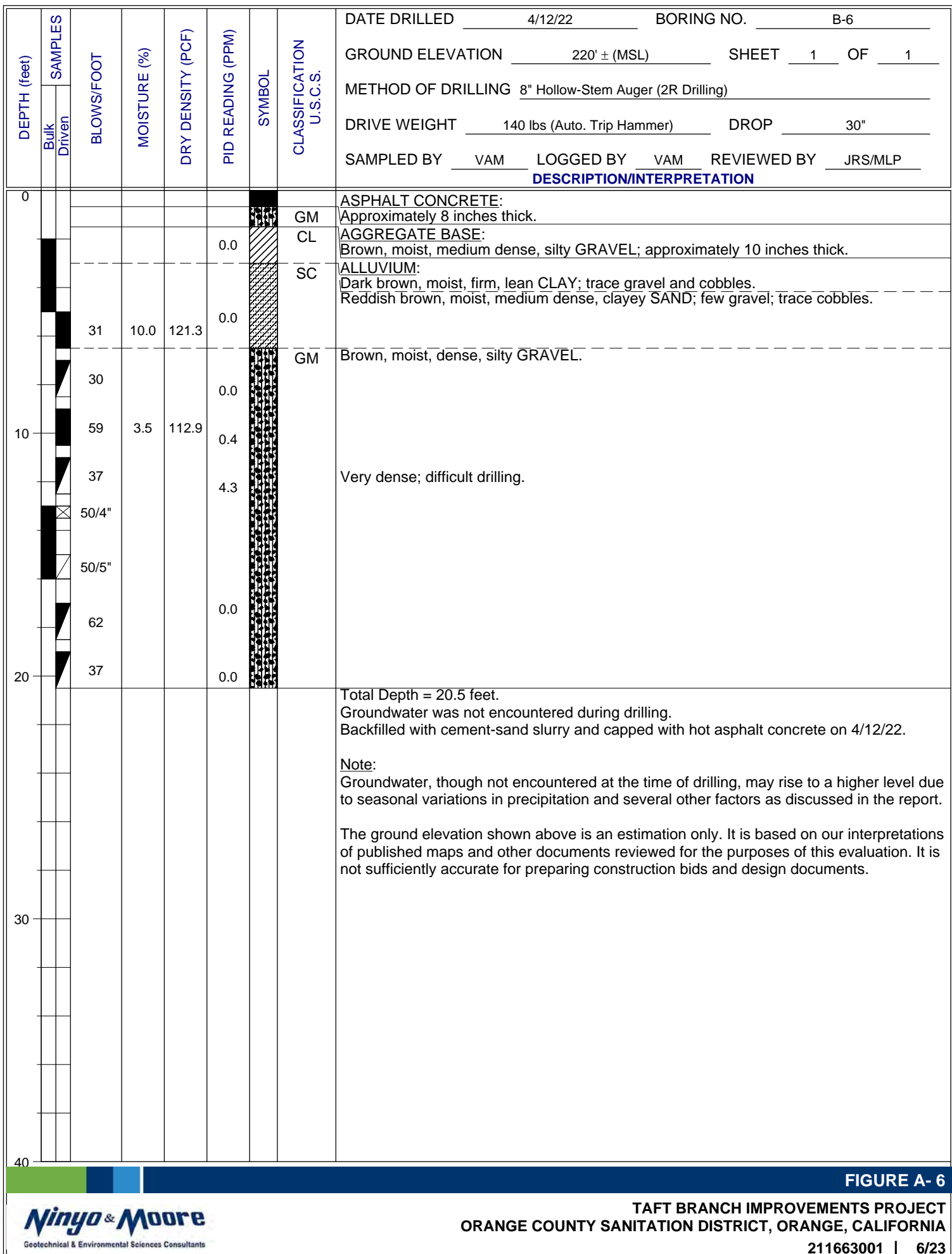


FIGURE A- 6

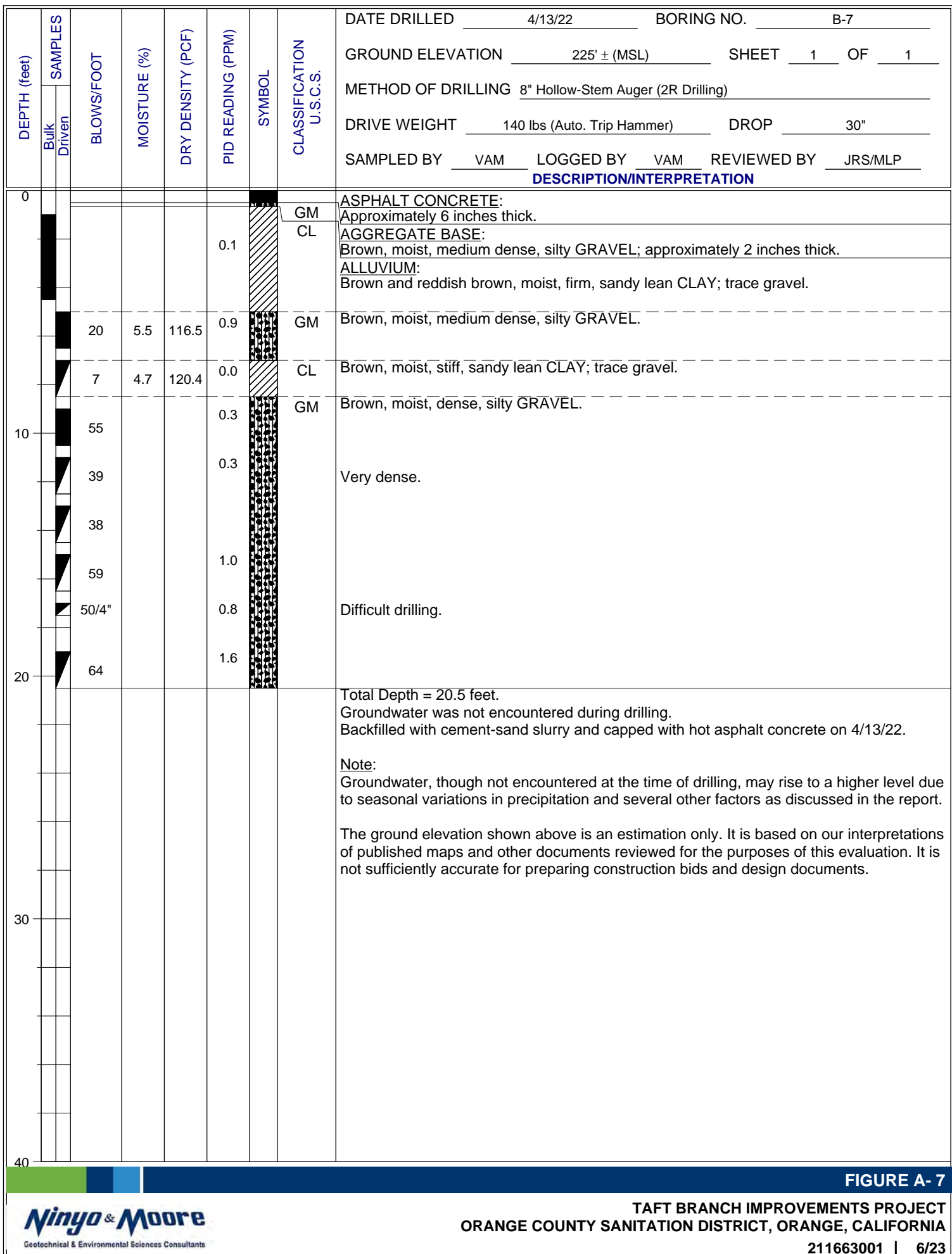


FIGURE A-7

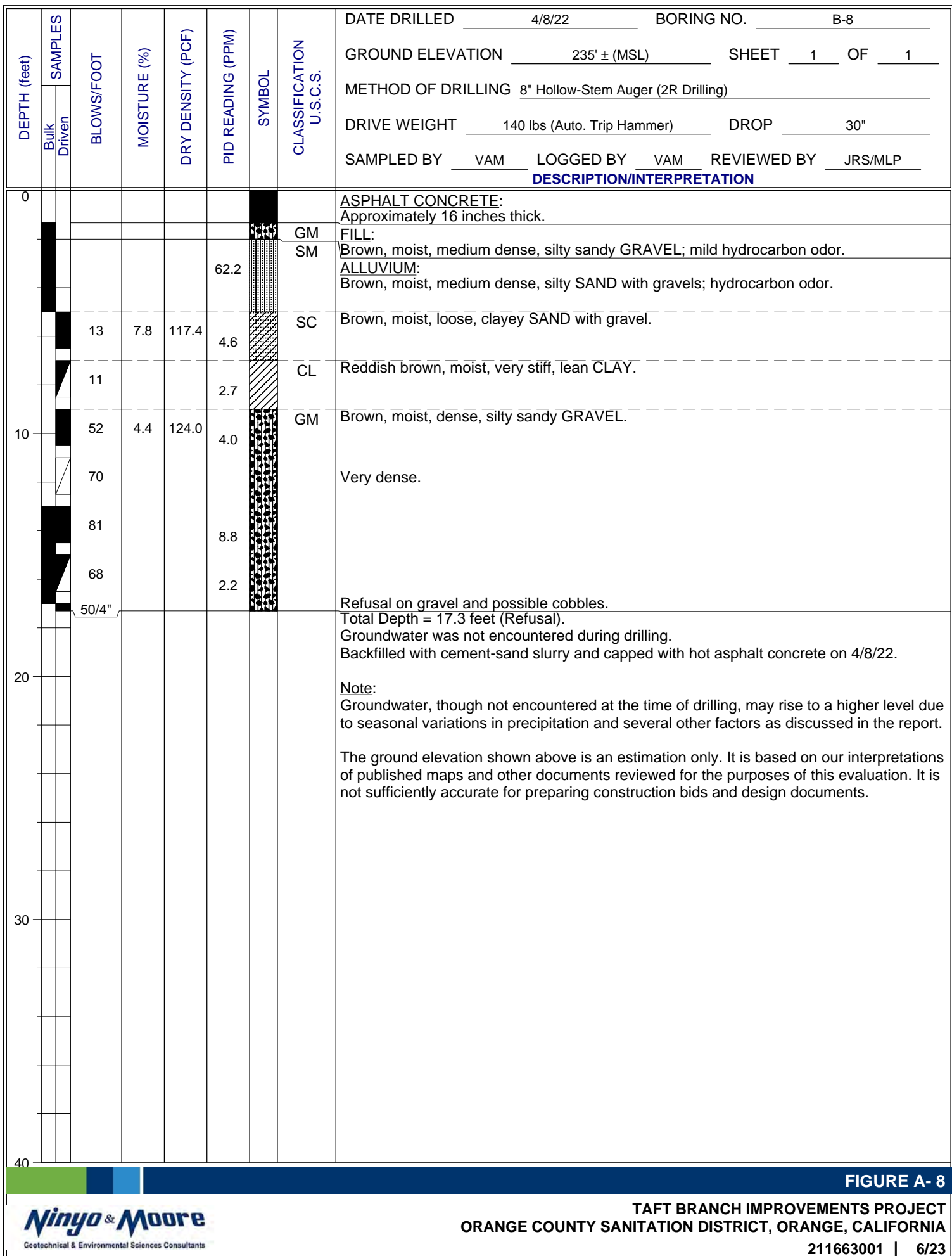


FIGURE A- 8

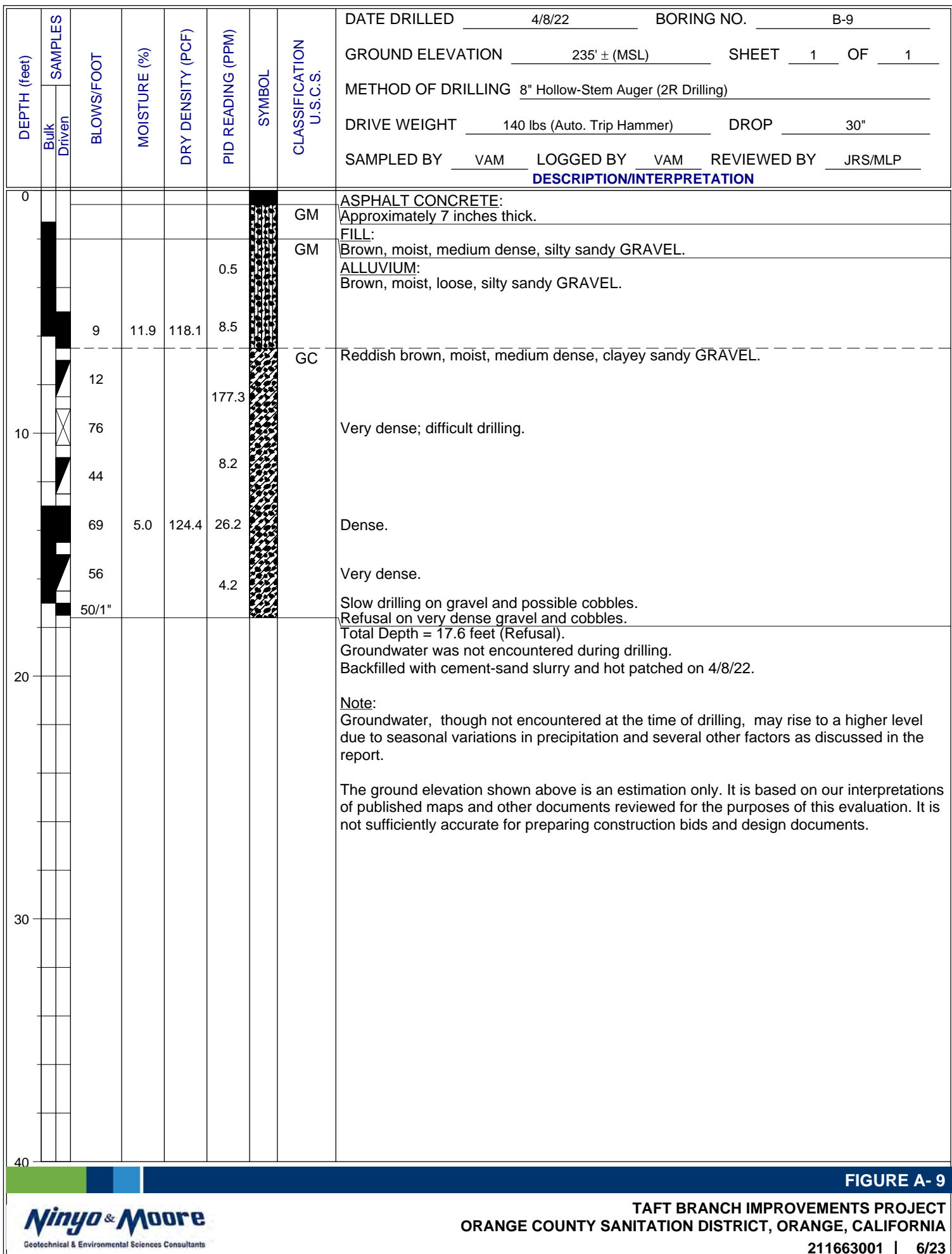


FIGURE A- 9

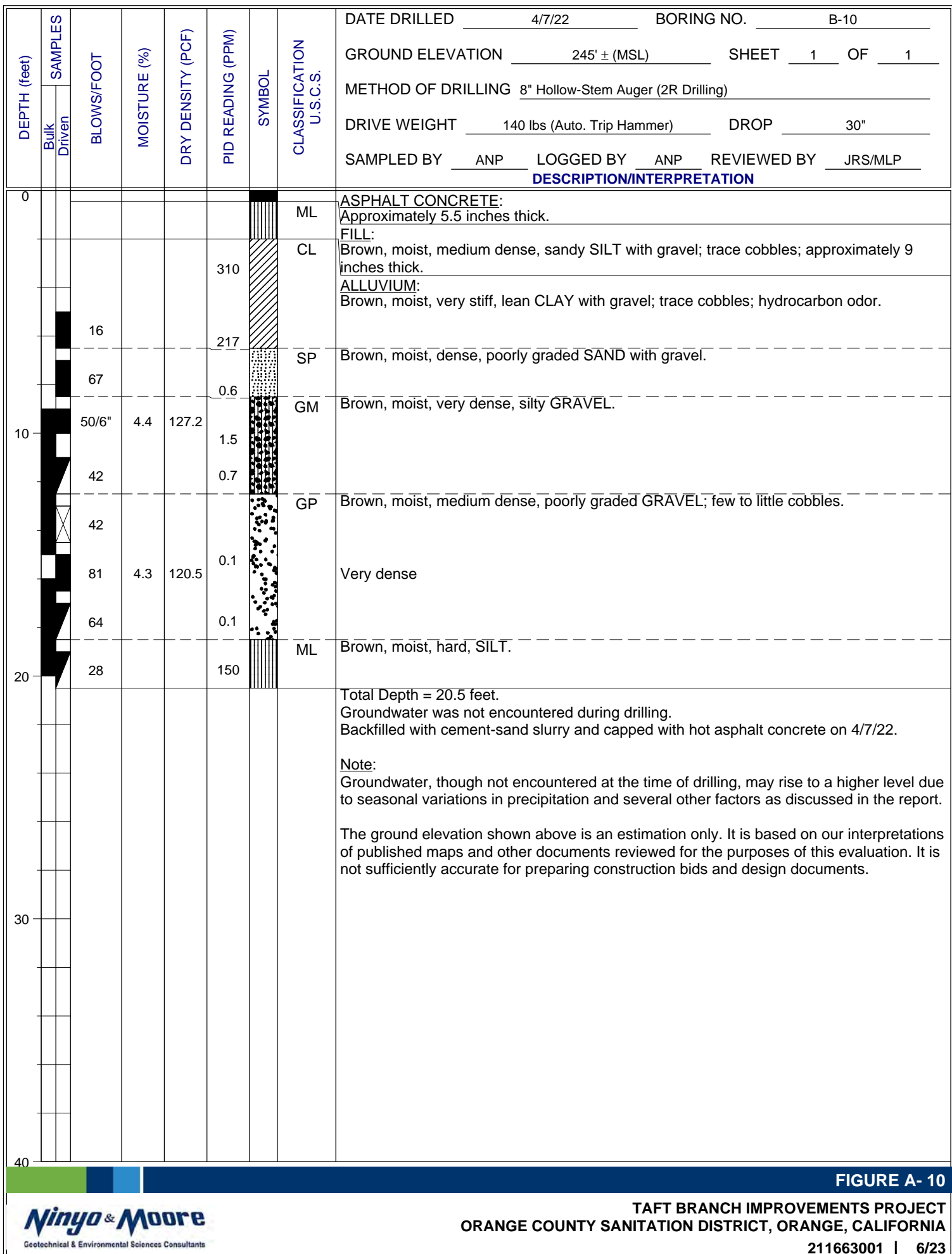


FIGURE A- 10

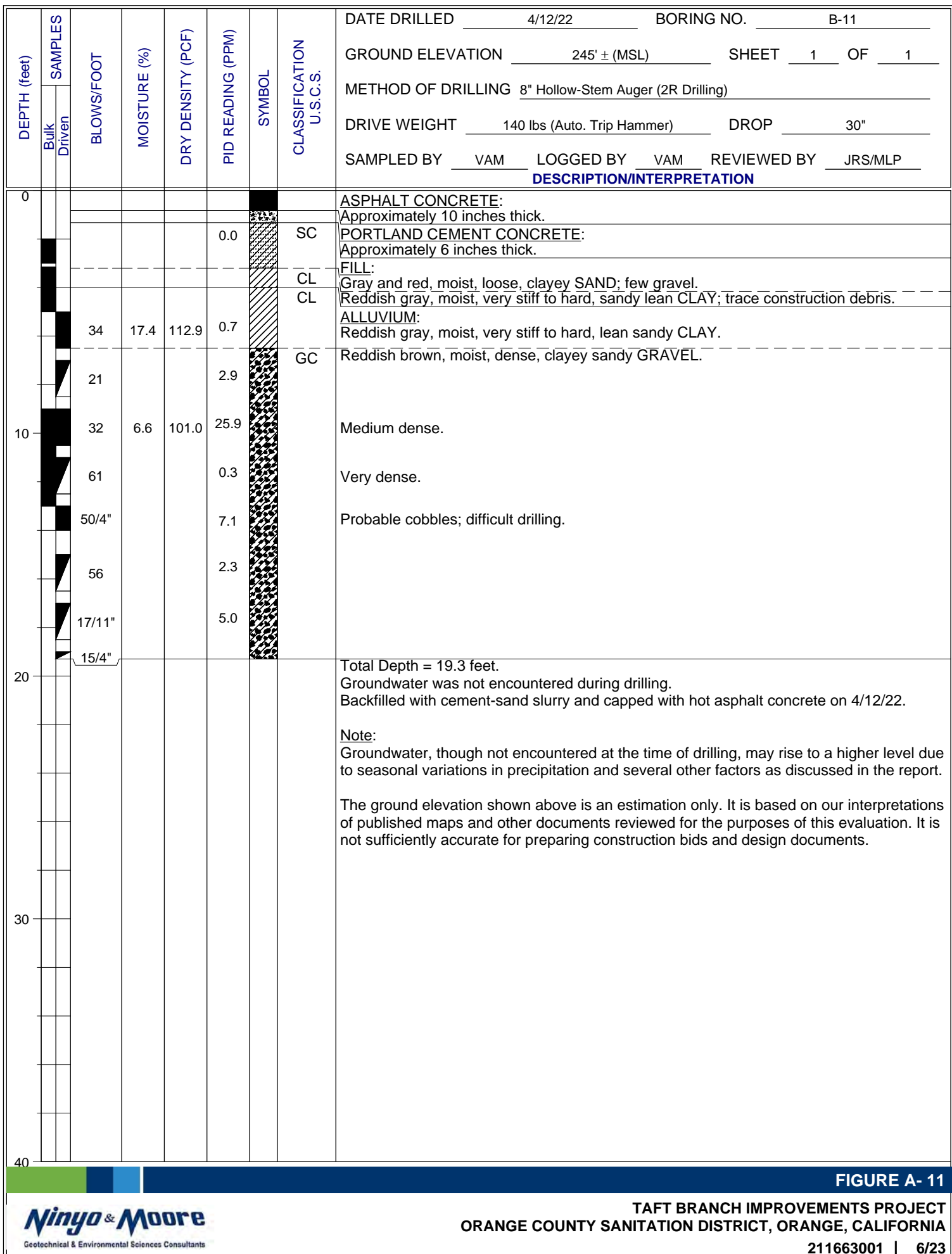


FIGURE A- 11

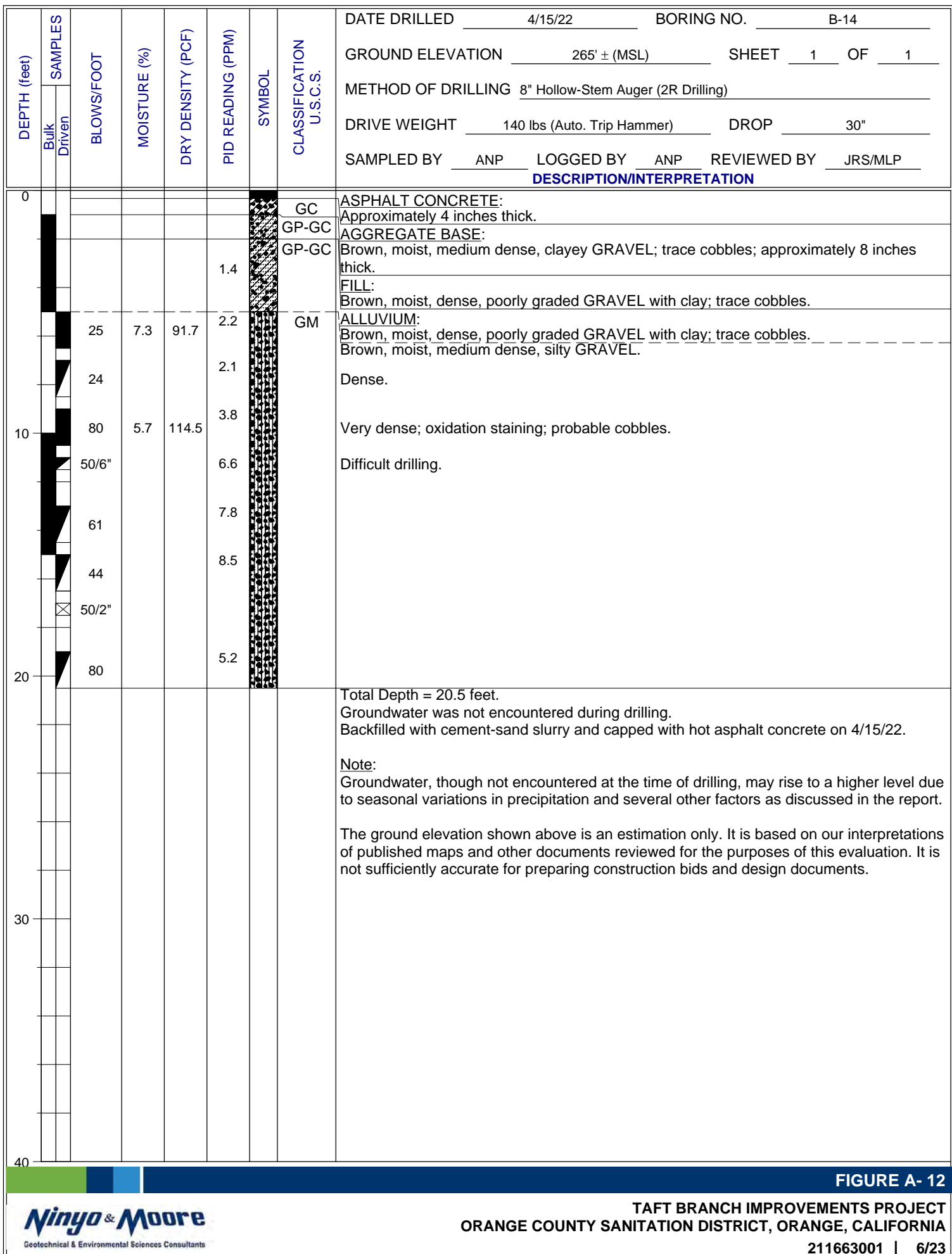


FIGURE A- 12

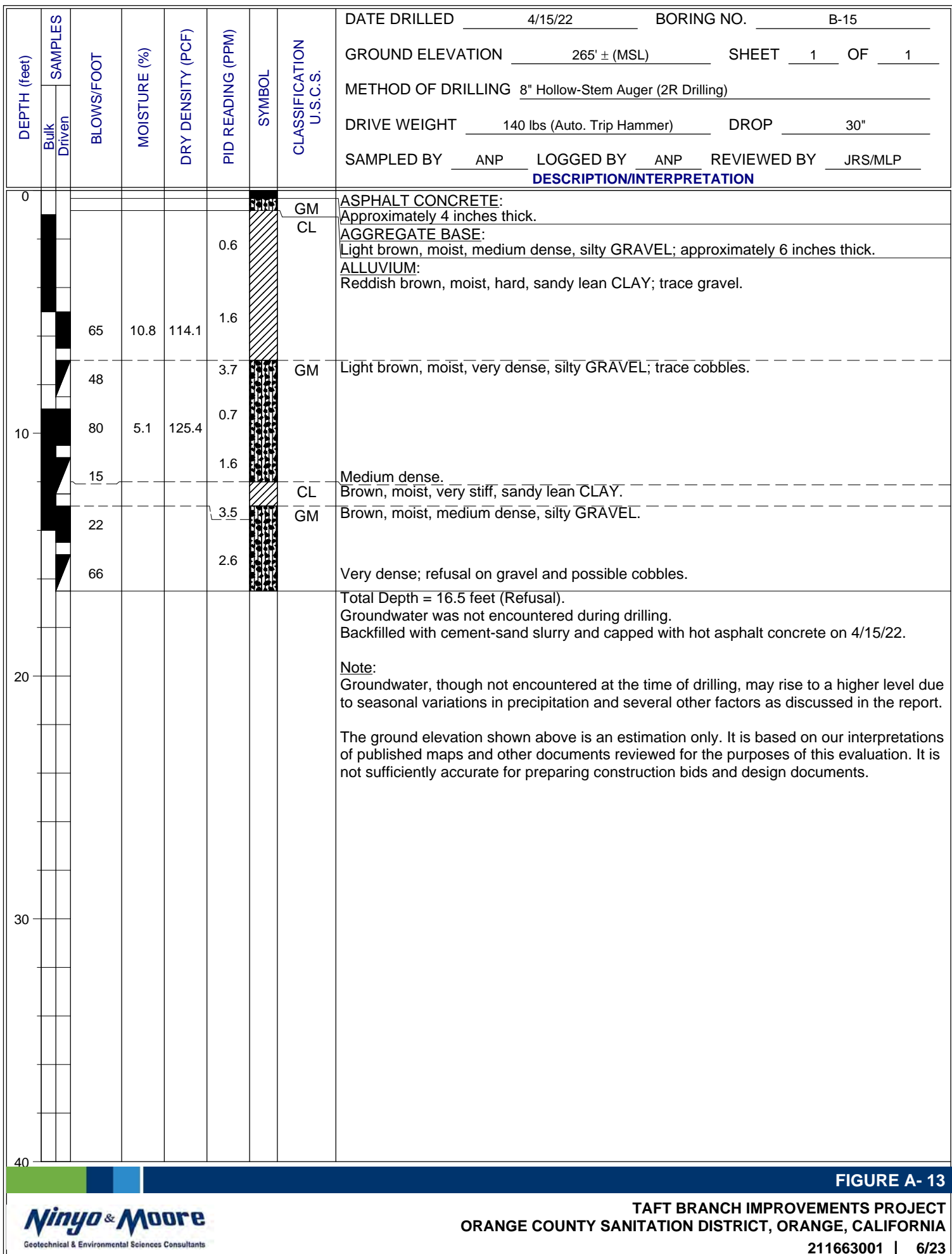


FIGURE A- 13

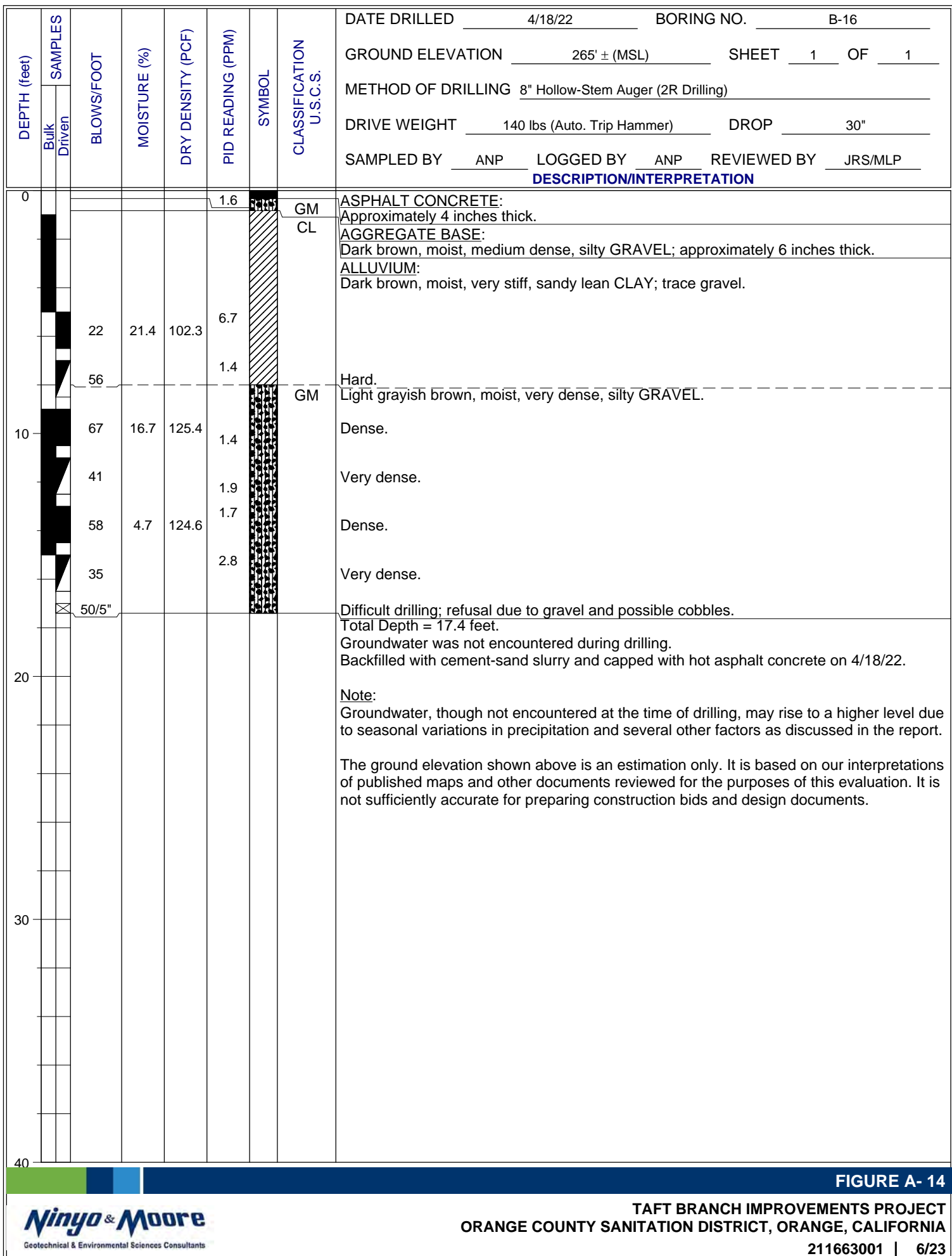


FIGURE A- 14

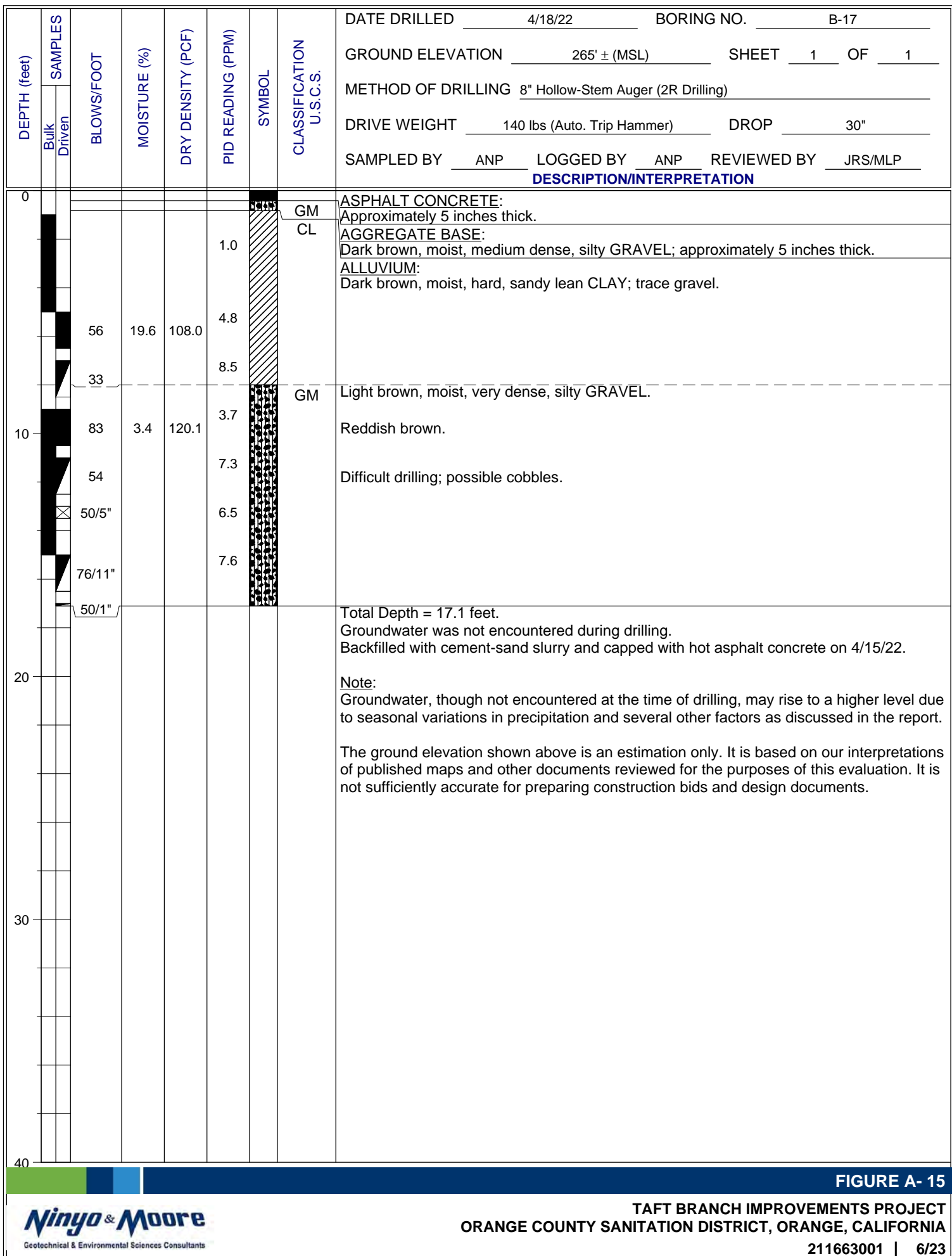


FIGURE A- 15

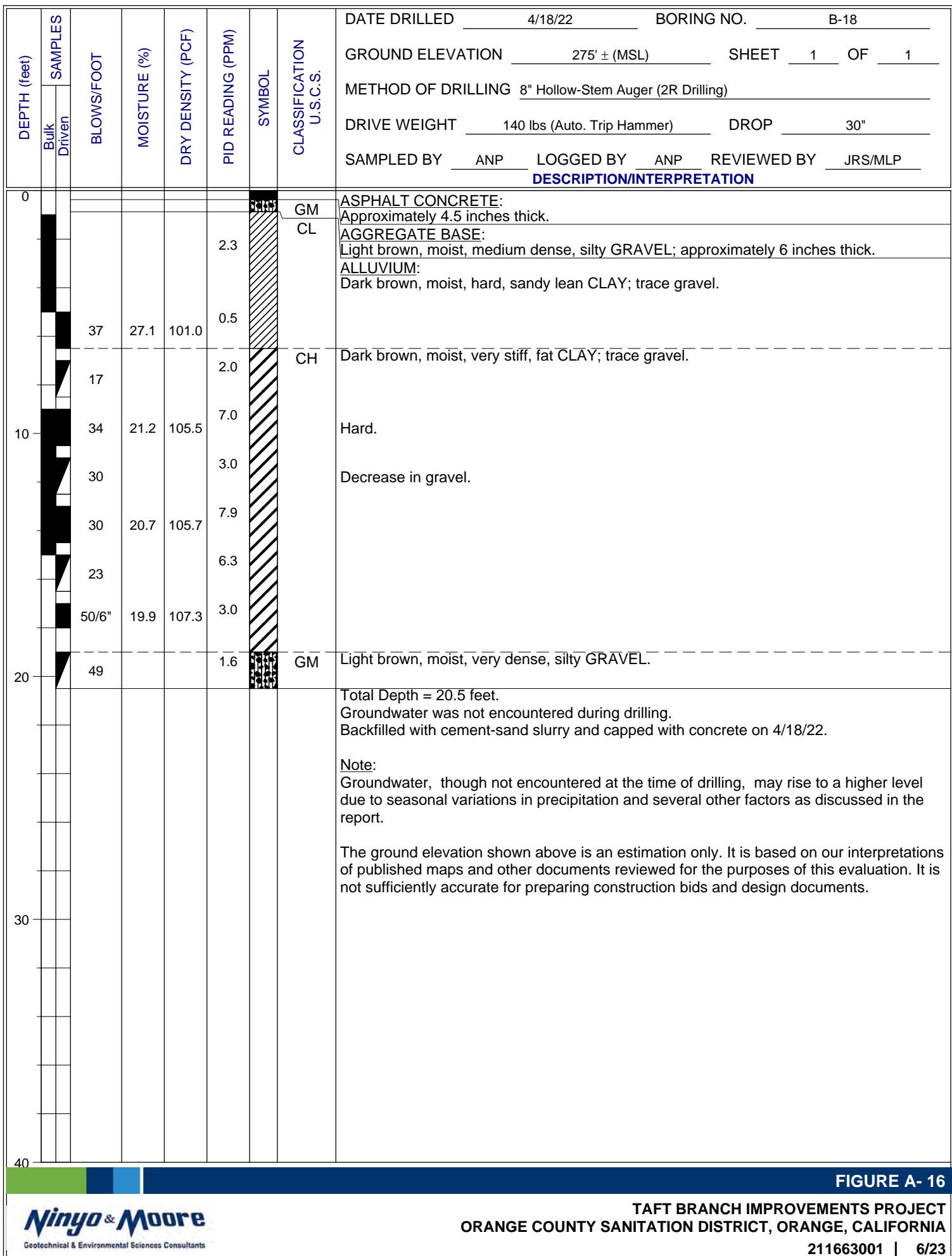


FIGURE A- 16

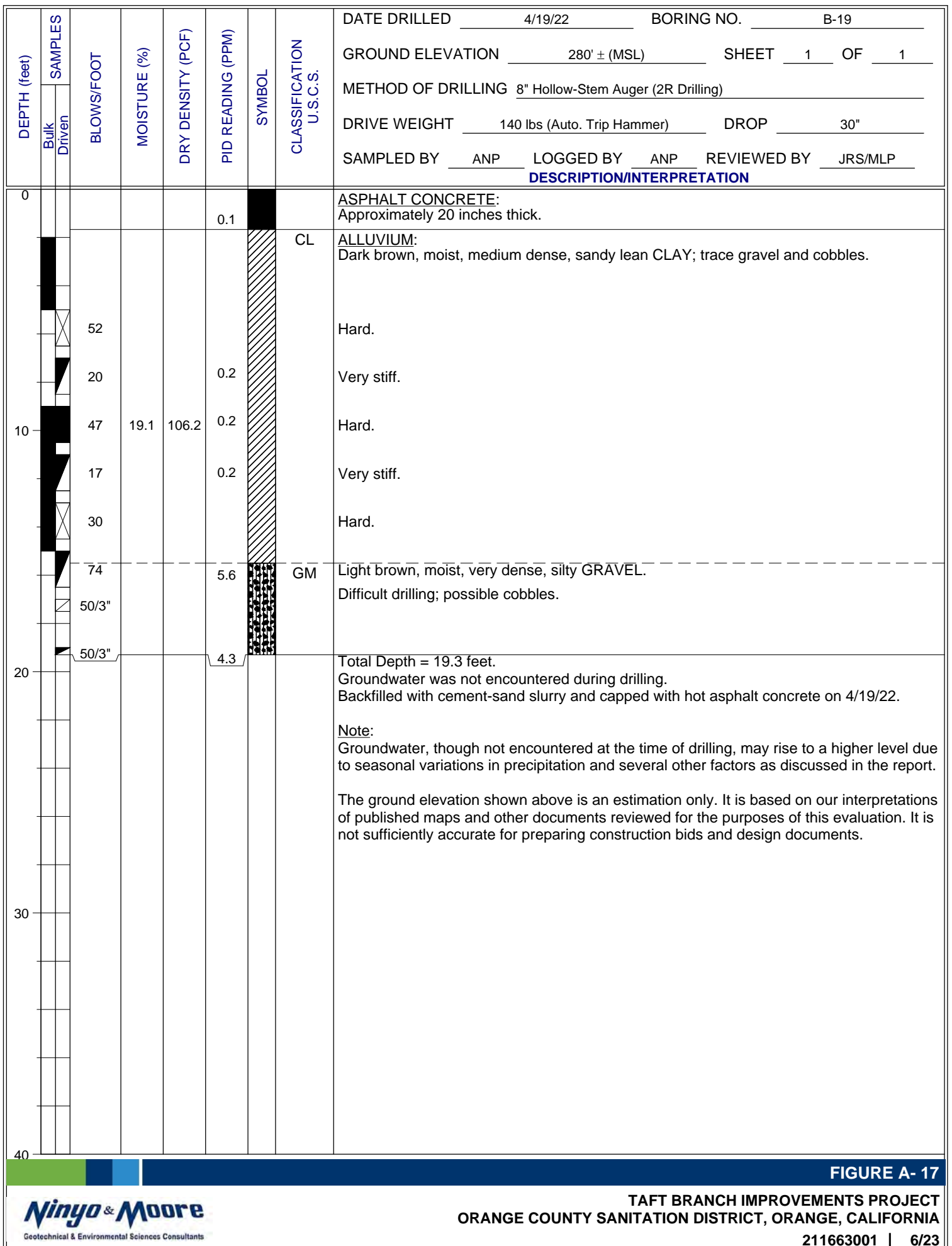


FIGURE A- 17

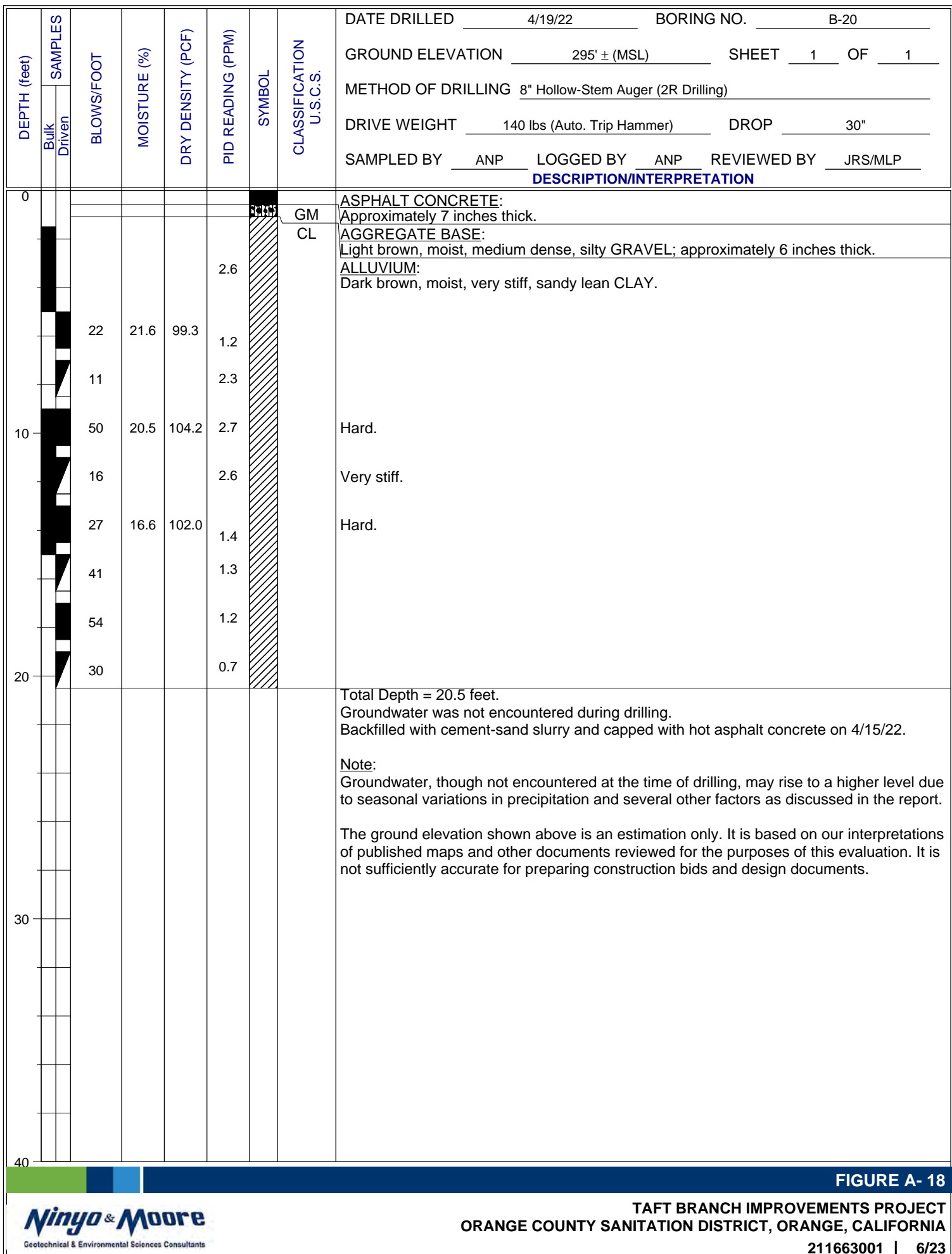


FIGURE A- 18



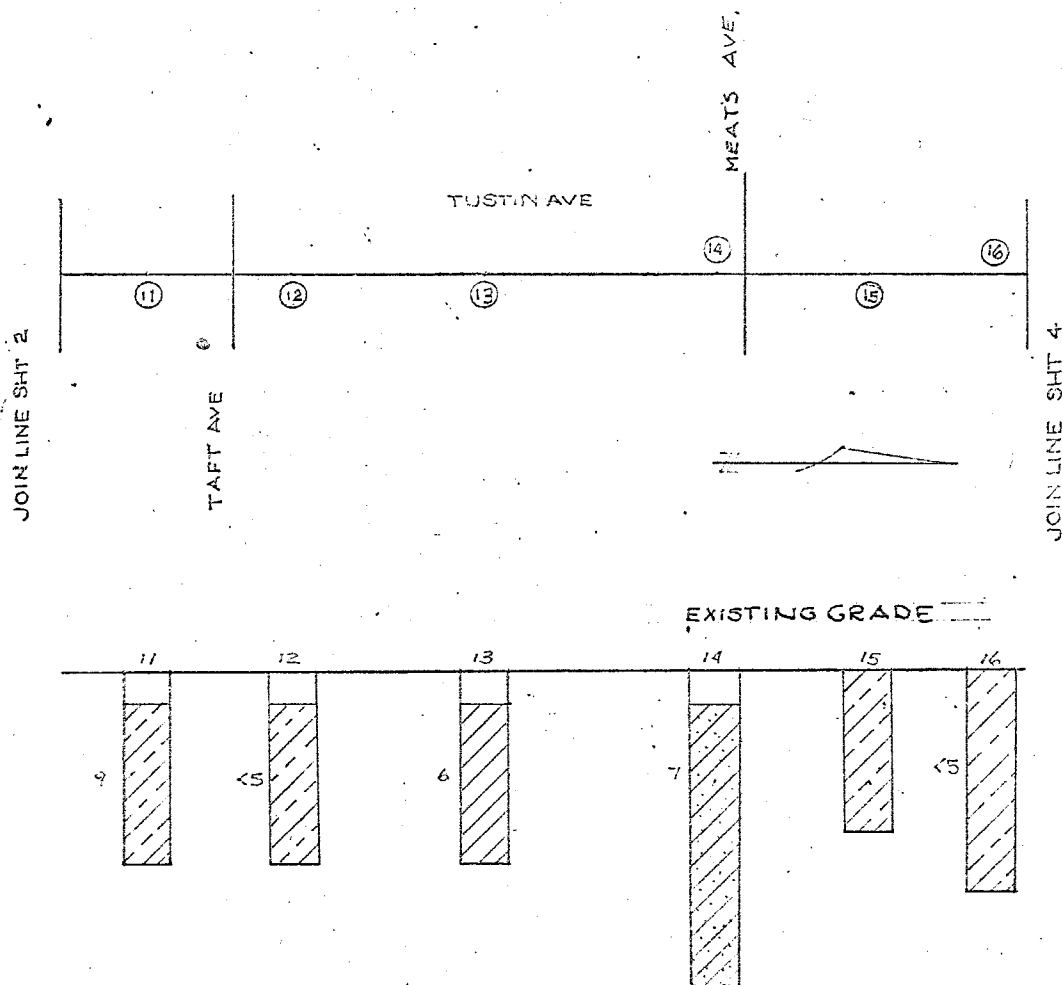
Previous Boring Logs by County of Orange, County Sanitation District, and Caltrans

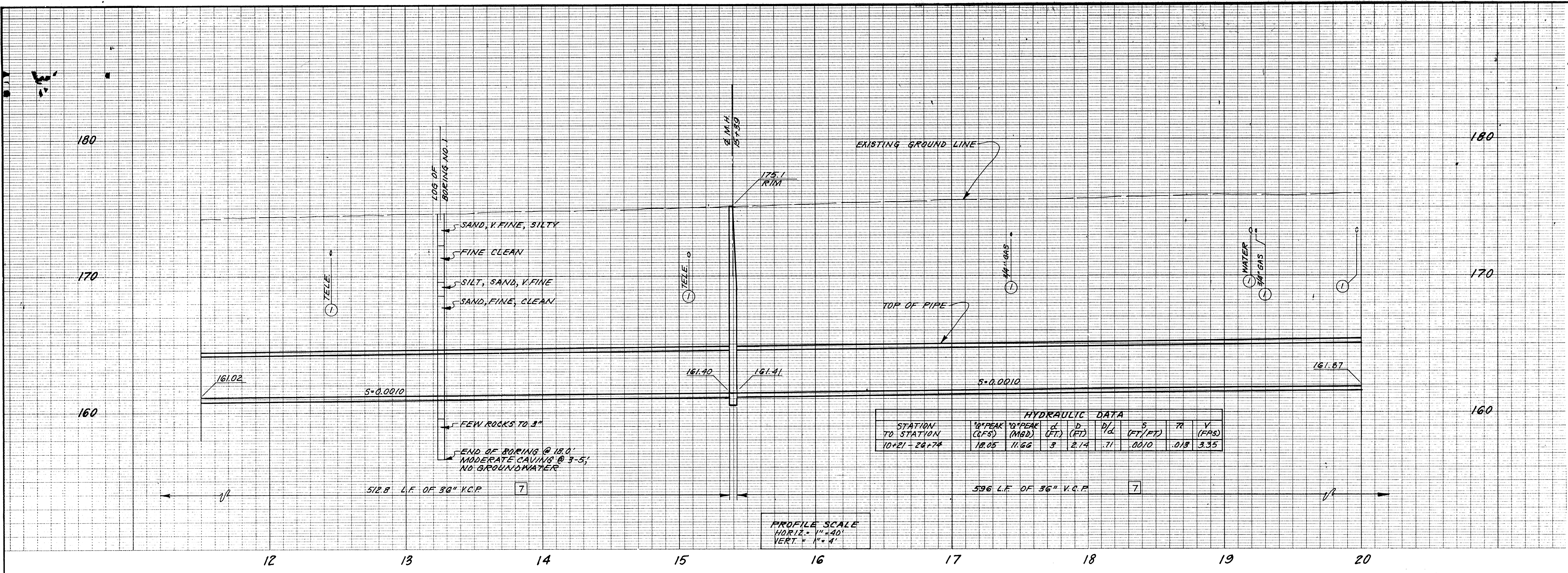
PROJECT NO. AWED 248

SOIL SURVEY SHEET

BY JOHN CHKD. BY DATE 4-23-65 PROJECT TUSTIN AVE LIMITS 750 S/O CHADMAN-LINCOLN SH. 2 of 6

DESCRIPTION	BORING OR SAMPLE NO.			11			12			13			14			15			16		
	LAB NUMBER			64-1943			64-1944			62-439			60-374			60-3005			64-2056		
	DATE SAMPLED			9-2-64			9-2-64			4-6-62			5-13-60			12-20-61			10-22-65		
	STATION			450'S/TAFT			300'S/TAFT			1186'S/MEATS			6'S/E MEATS			300'S/MEATS			1600'S/N/MEATS		
	DISTANCE FROM E			20'E			28'E			40'E			200'W			20'W			15'W		
	DEPTH OR ELEVATION			05'-20"			05'-20"			05'-30"			02'-50"			02'-20"			02'-30"		
	TYPE OF MATERIAL			SILTY CLAY			SILTY CLAY			CLAY			SANDY CLAY			SANDY CLAY			SILTY CLAY		
	% PASSING NO. 4			100			100			100			100			100			100		
SIEVE ANALYSIS	" " 8			100			100			100			96			100			97		
	" " 16			100			100			100			92			100			91		
	" " 30			100			100			100			87			100			95		
	" " 50			100			100			100			80			100			86		
	" " 100			100			100			100			73			100			80		
	" " 200			100			100			100			68			100			70		
	% SAND & ROCK (+200)			10			10			10			25.3			23			21		
	% SILT (-200 to 5 microns)			42			42			28.5			22.9			24			27		
	% CLAY (-5 microns)			48			48			61.5			41.8			43			49		
STABILOMETER TEST	SPECIMEN IDENTIFICATION			A B C			A B C			A B C			A B C			A B C			A B C		
	COMPACTOR AIR PRESSURE			2 4 8			2 4 8			2 4 8			2 4 8			2 4 8			2 4 8		
	MOISTURE AT COMP. %			13.4 13.1 14.8			16.5			0 22.1 18.5 16.7			10.7			18.7 12.2 10.8			18.7 12.2 10.8		
	DRY DENS. OF BRIQ. lbs/cu.ft.			105 111.3 115.5			108			105.4 105.6 111			107.4 115.3 121.1			107.4 115.3 121.1			107.4 115.3 121.1		
	EXUDATION PRESSURE P.S.I.			275 270 490			250			270 270 330			230 245 645			410 645 900			410 645 900		
	STABILOMETER R-VALUE			7 15 25			25			7 15 25			6 8 22			7 10 22			7 10 22		
	G.E.-STABILOMETER-INCHES			25.1 22.6 19.6			25.1			25.1 20.6 16.6			25.4 24.8 20.6			25.1 24.2 17.4			25.1 24.2 17.4		
	EXPAN. PRESSURE-INCHES			0 0 1.5			5			0 0 30			0 0 1			0 0 13.5			0 0 13.5		
	R-VALUE at EQUILIBRIUM			4 STAR			< 5 STAR			4 STAR			7 STAR			< 5 STAR			< 5 STAR		
	G.E. at EQUILIBRIUM-INCHES			24.51			25.72			25.72			25.11			25.72			25.72		
	FIELD MOISTURE %			10.06			20.00			20.00			20.00			20.00			20.00		
	TRAFFIC INDEX			8.0			8.0			8.0			8.0			8.0			8.0		

PLAN VIEW OF BORINGS
SCALE-Horiz. 1" = 1000'LOG OF TEST BORINGS
SCALE-Vert. 1" = 3'

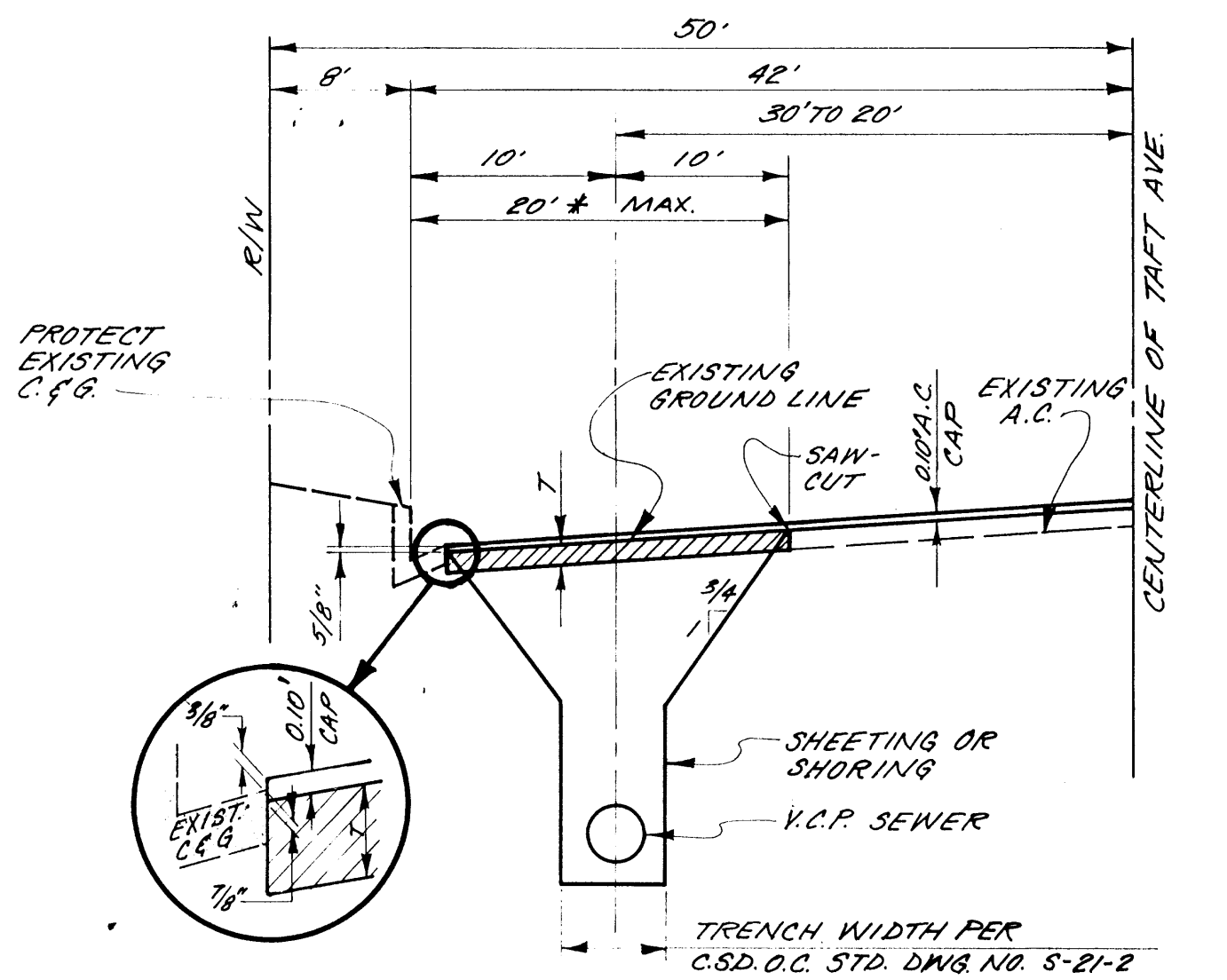
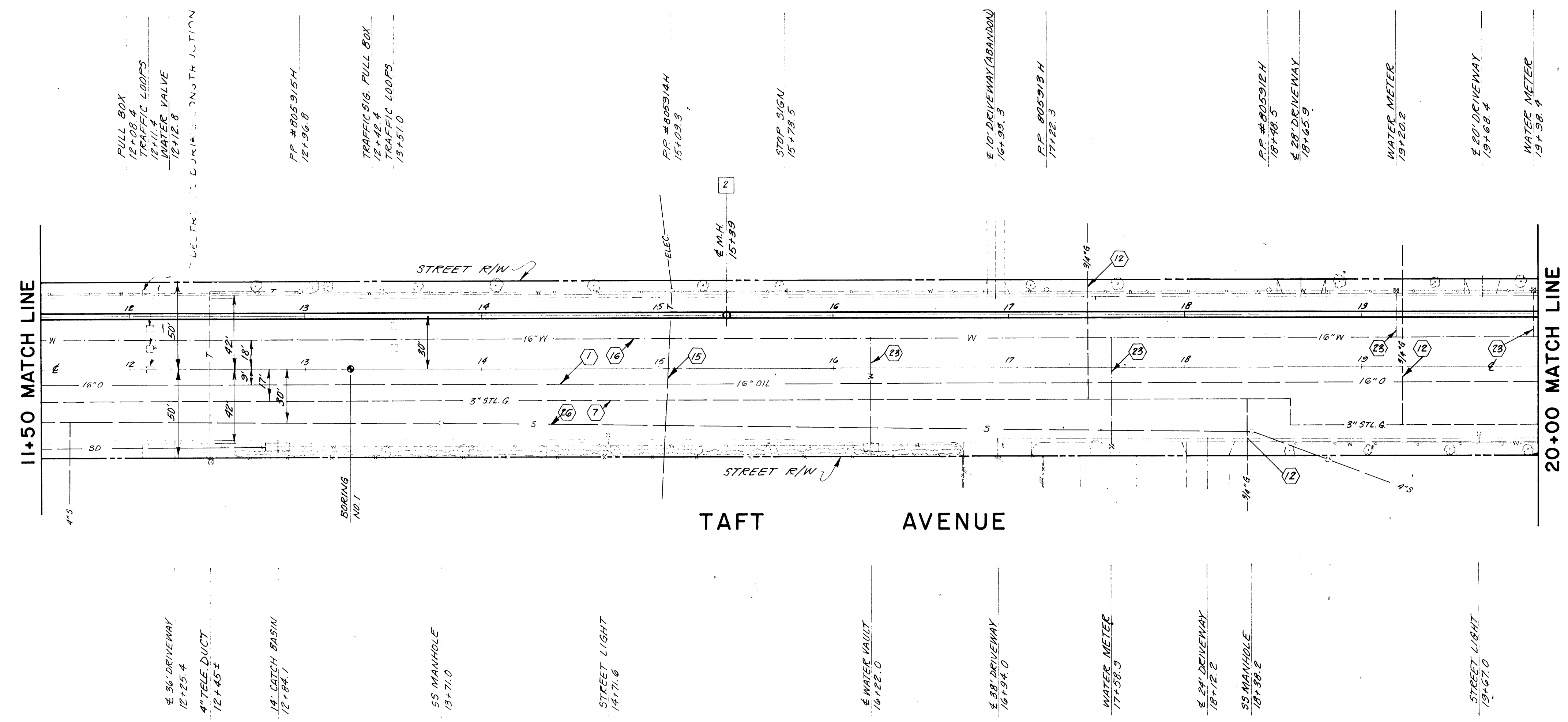
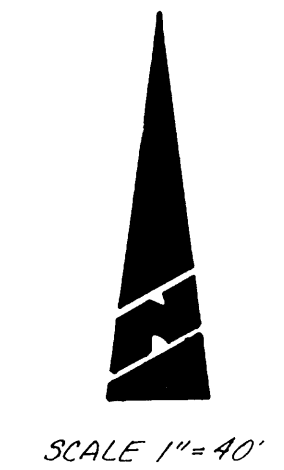


UTILITIES

DESCRIPTION	OWNER
① 16" STEEL OIL	FOUR CORNERS PIPELINE
⑦ 3" STEEL GAS	SO. CALIF. GAS, TRANS.
⑫ 3/4" PE GAS	SO. CALIF. GAS, TRANS.
⑮ TELEPHONE CONDUIT	PACIFIC BELL
⑯ 16" WATER	CITY OF ORANGE
⑰ WATER SERVICE	CITY OF ORANGE
⑳ 12" V.C.P. SEWER	C.S.D.O.C.

- CONSTRUCTION NOTES**
- ② CONSTRUCT 60" I.D. STANDARD MANHOLE PER C.S.D.O.C. STANDARD DRAWING NO. S-25-1.
 - ⑦ CONSTRUCT 56" EXTRA STRENGTH V.C.P. WITH STANDARD BEDDING PER C.S.D.O.C. STANDARD DWG. NO. S-21-2.

- DISPOSITION NOTES**
- ① PROTECT IN PLACE

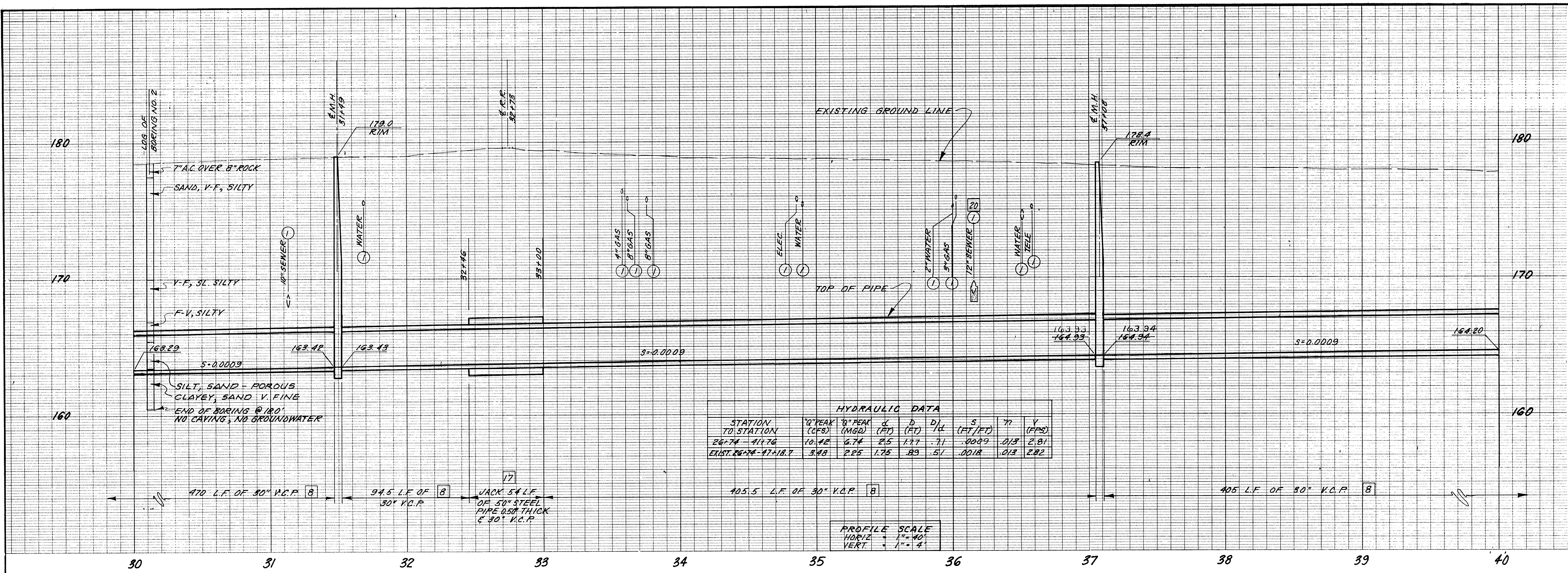


* TRENCH RESURFACING WIDTH FOR PURPOSE OF QUANTITY ESTIMATE WIDTH MAY VARY WITH CONSTRUCTION.

TRENCH RESURFACING TABLE (T)

WEST OF BATAVIA ST.	EAST OF BATAVIA ST.
0.30' AC / 1.50' AB	0.30' AC / 1.45' AB

"AS CONSTRUCTED"

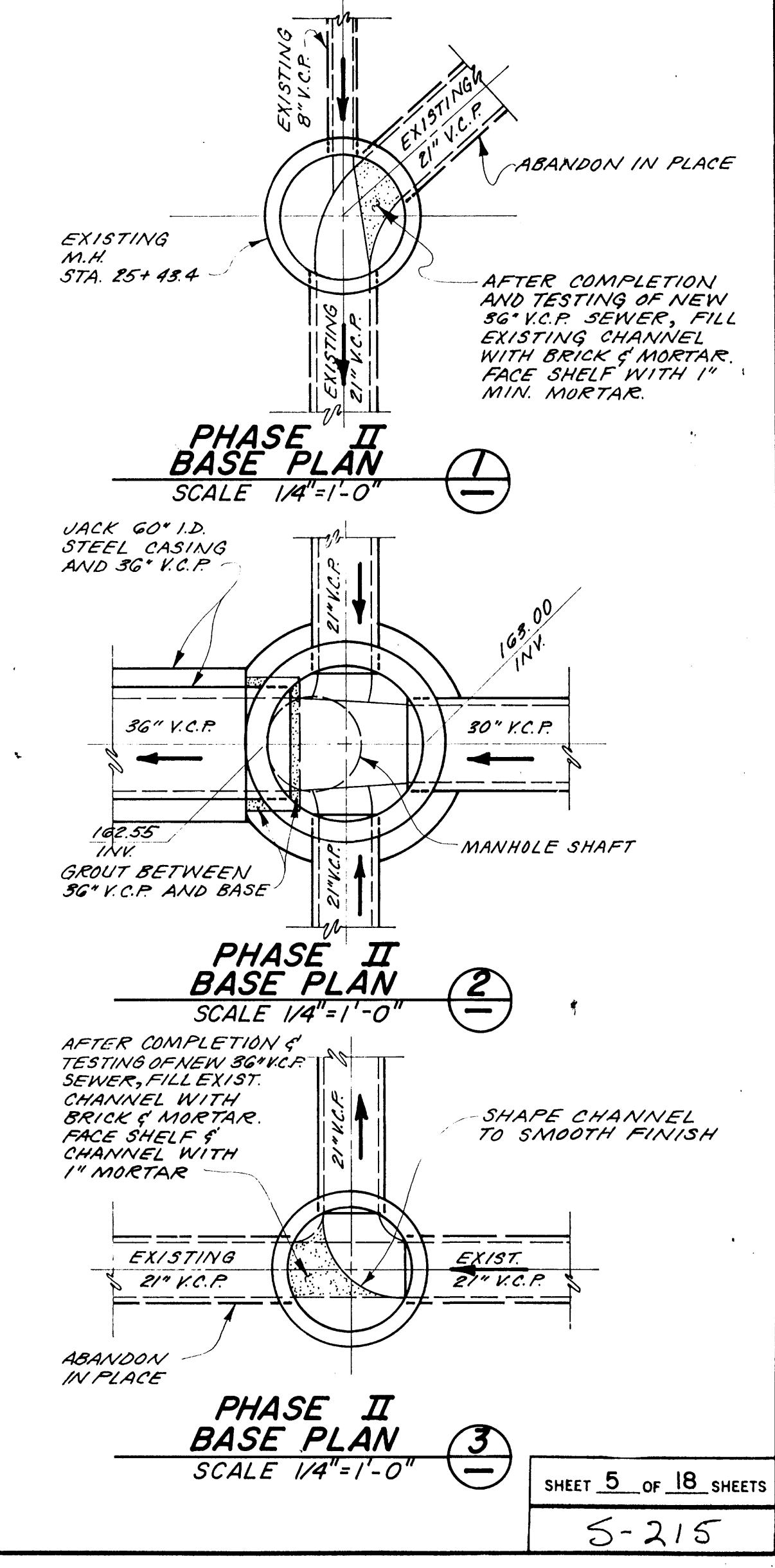
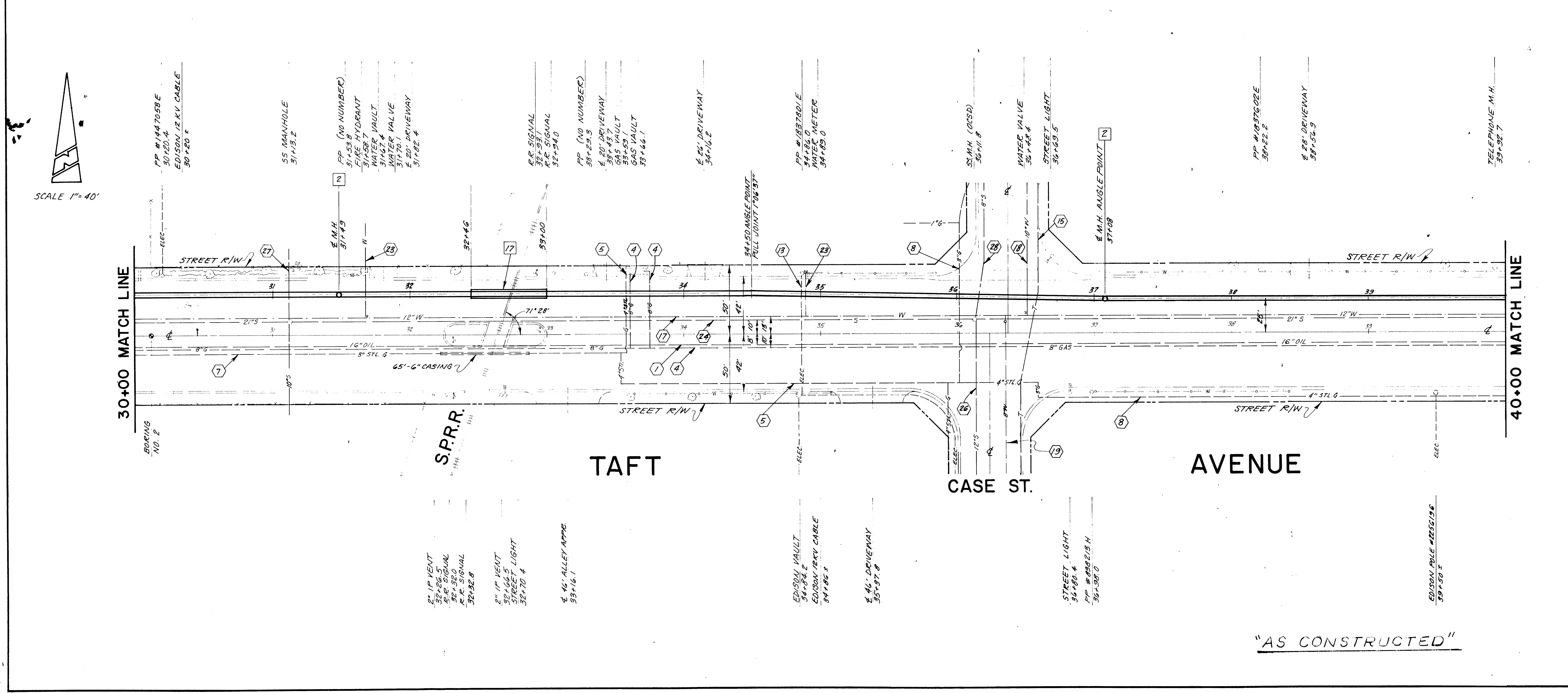


UTILITIES

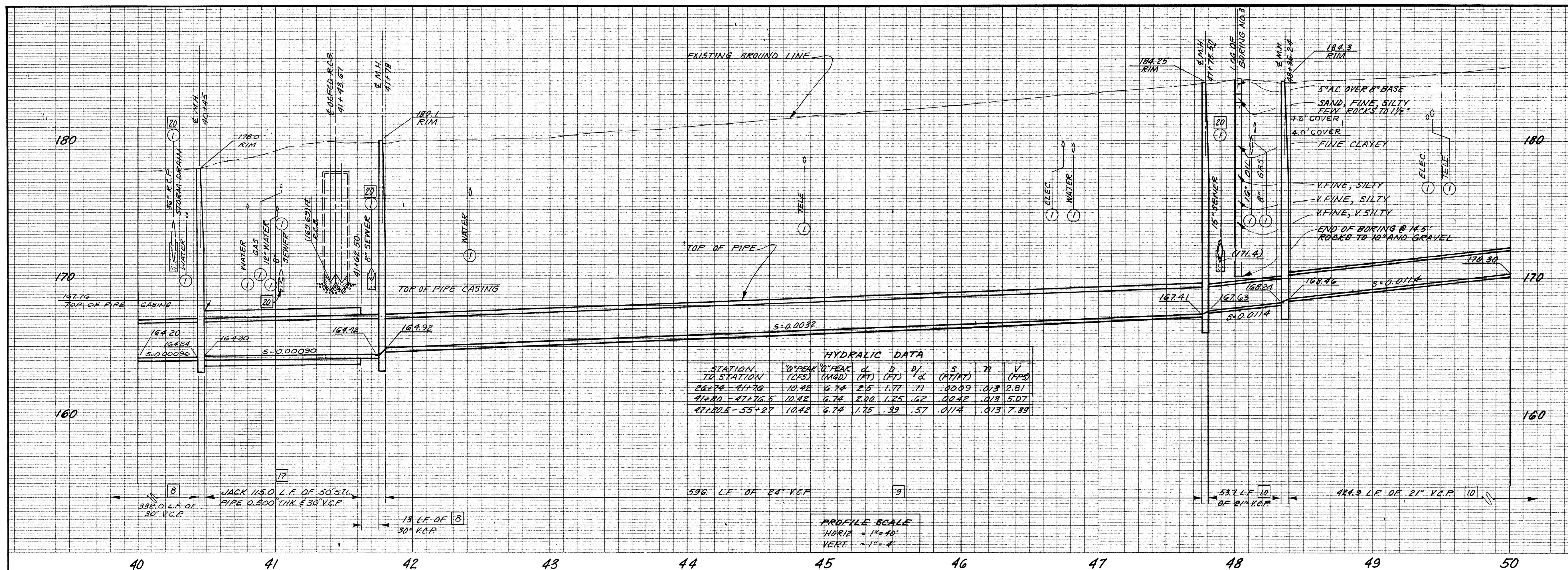
DESCRIPTION	OWNER
16" STEEL OIL	FOUR CORNERS PIPELINE
8" STEEL H.P. GAS	SO. CALIF. GAS, TRANS.
4" STEEL GAS	SO. CALIF. GAS, TRANS.
3" STEEL GAS	SO. CALIF. GAS, TRANS.
3" PE GAS	SO. CALIF. GAS, TRANS.
12 KV ELECTRIC CABLE	SO. CALIF. EDISON
TELEPHONE CONDUIT	PACIFIC BELL
12" WATER	CITY OF ORANGE
10" WATER	CITY OF ORANGE
8" WATER	CITY OF ORANGE
WATER SERVICE	CITY OF ORANGE
21" V.C.P. SEWER	C.S.D.O.C.
12" V.C.P. SEWER	C.S.D.O.C.
10" V.C.P. SEWER	CITY OF ORANGE
8" V.C.P. SEWER	CITY OF ORANGE

- CONSTRUCTION NOTES**
- CONSTRUCT 60" I.D. STANDARD MANHOLE PER C.S.D.O.C. STANDARD DRAWING NO. 5-25-1.
 - CONSTRUCT 30" EXTRA STRENGTH V.C.P. WITH STANDARD BEDDING PER C.S.D.O.C. STANDARD DWG. NO. 5-21-2.
 - JACK 50" MIN. I.D. STEEL CASING, 0.500" MIN. WALL THICKNESS, AND 30" EXTRA STRENGTH V.C.P. PER C.S.D.O.C. STANDARD DRAWING NO. 5-36-1.
 - CONSTRUCT PIPE SUPPORT PER C.S.D.O.C. STANDARD DRAWING NO. 5-37-1.

- DISPOSITION NOTES**
- PROTECT IN PLACE



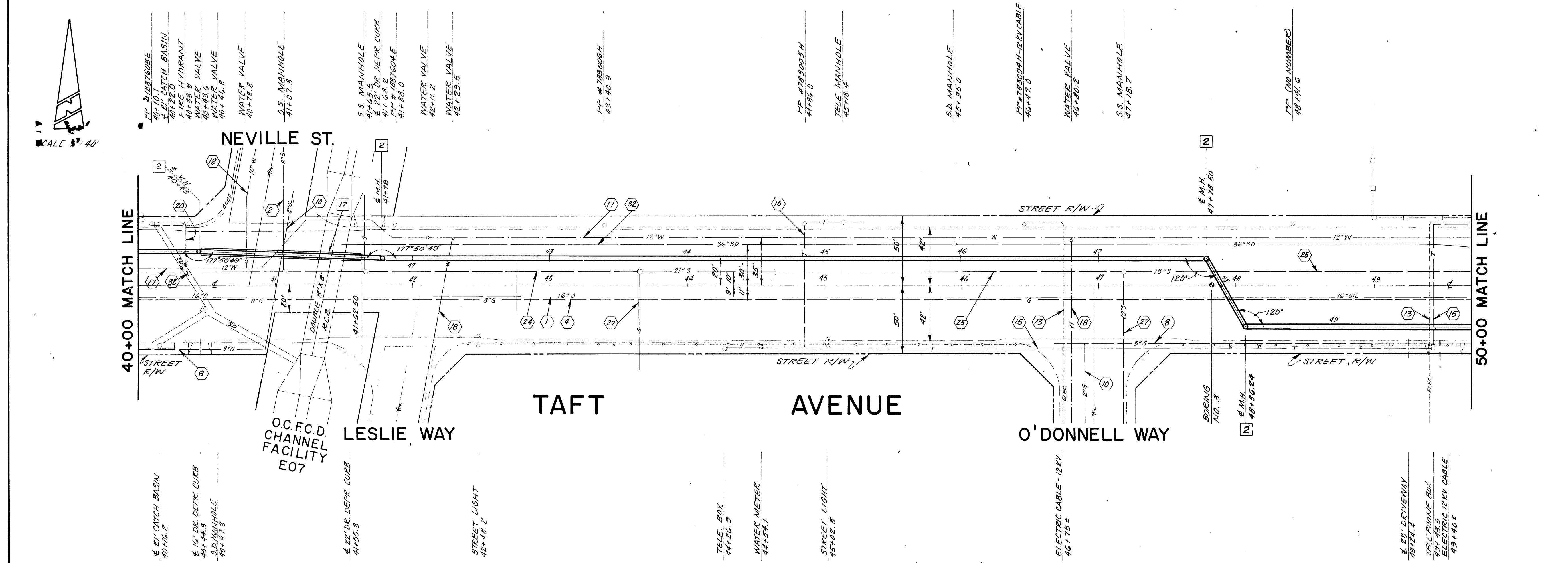
"AS CONSTRUCTED"



UTILITIES	
DESCRIPTION	OWNER
16" STEEL OIL	FOUR CORNERS PIPELINE
8" STEEL H.P. GAS	SO. CALIF. GAS, TRANS.
3" PE GAS	SO. CALIF. GAS, TRANS.
2" PE GAS	SO. CALIF. GAS, TRANS.
1" PE GAS	SO. CALIF. GAS, TRANS.
12 KV ELECTRIC CABLE	SO. CALIF. EDISON
TELEPHONE CONDUIT	PACIFIC BELL
12" WATER	CITY OF ORANGE
10" WATER	CITY OF ORANGE
6" WATER	CITY OF ORANGE
21" V.C.P. SEWER	C.S.D.O.C.
15" V.C.P. SEWER	C.S.D.O.C.
10" V.C.P. SEWER	CITY OF ORANGE
8" V.C.P. SEWER	CITY OF ORANGE
42" R.C.P. STORM DRAIN	CITY OF ORANGE
36" R.C.P. STORM DRAIN	CITY OF ORANGE


- CONSTRUCTION NOTES**
- CONSTRUCT 60" I.D. STANDARD MANHOLE PER C.S.D.O.C. STANDARD DRAWING NO. S-25-1.
 - CONSTRUCT 30" EXTRA STRENGTH V.C.P. WITH STANDARD BEDDING PER C.S.D.O.C. STANDARD DWG. NO. S-21-2.
 - CONSTRUCT 24" EXTRA STRENGTH V.C.P. WITH STANDARD BEDDING PER C.S.D.O.C. STANDARD DWG. NO. S-21-2.
 - CONSTRUCT 21" EXTRA STRENGTH V.C.P. WITH STANDARD BEDDING PER C.S.D.O.C. STANDARD DWG. NO. S-21-2.
 - JACK 38" MIN. I.D. STEEL CASING 0.500" MIN. WALL THICKNESS, AND 30" EXTRA STRENGTH V.C.P. PER C.S.D.O.C. STANDARD DRAWING NO. S-36-1.
 - CONSTRUCT PIPE SUPPORT PER C.S.D.O.C. STANDARD DRAWING NO. S-37-1.

- DISPOSITION NOTES**
- PROTECT IN PLACE

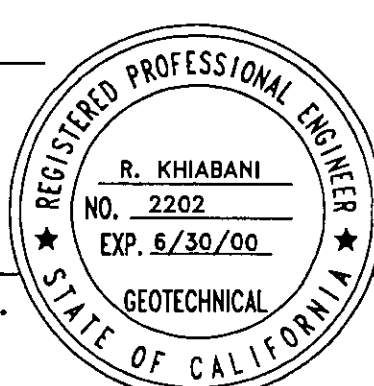


"AS CONSTRUCTED"

DIST	COUNTY	ROUTE	KILOMETER POSTS TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	55	20.3/R28.6	446	481



REGISTERED GEOTECHNICAL ENGINEER



PLAN APPROVAL DATE

LEIGHTON & ASSOCIATES, INC.

17781 COWAN AVENUE

IRVINE, CA-92714

AS BUILT

CO. 1000 V. FRANCIS B.H. 4/14/54

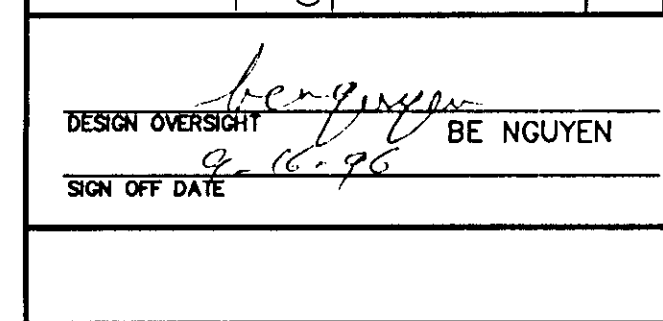
CONTRACT NO. 12-013344

DATE 9/4/01

A. BHATTACHARYA
FIELD INVESTIGATOR
DATE 11/22/94
ORIGINAL SCALE IN mm FOR REDUCED PLANS 0

R. KHIABANI	
PROJECT ENGINEER	
CU 12211	
EA 013341	

MEATS AVENUE O.C. (REPLACE)										
LOG OF TEST BORINGS										
TESTS BEARING ON DATES	REVISION DATES (PRELIMINARY STAGE ONLY)								PLATE	OF
—	3/27/98	5/11/98	7/7/98						15	16



SB-2

Station 253+07.52
Offset 15.81 m Rt.

Top Hole Elevation
+87.31 m

AC over roadgrade
Loose, moist, dark
coarse CLAYEY SAND

Soft to stiff, moist,
to SILTY CLAY with

with trace of fine


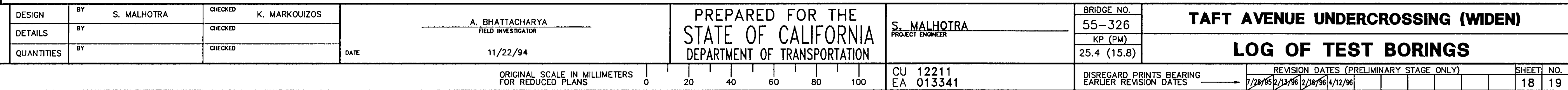
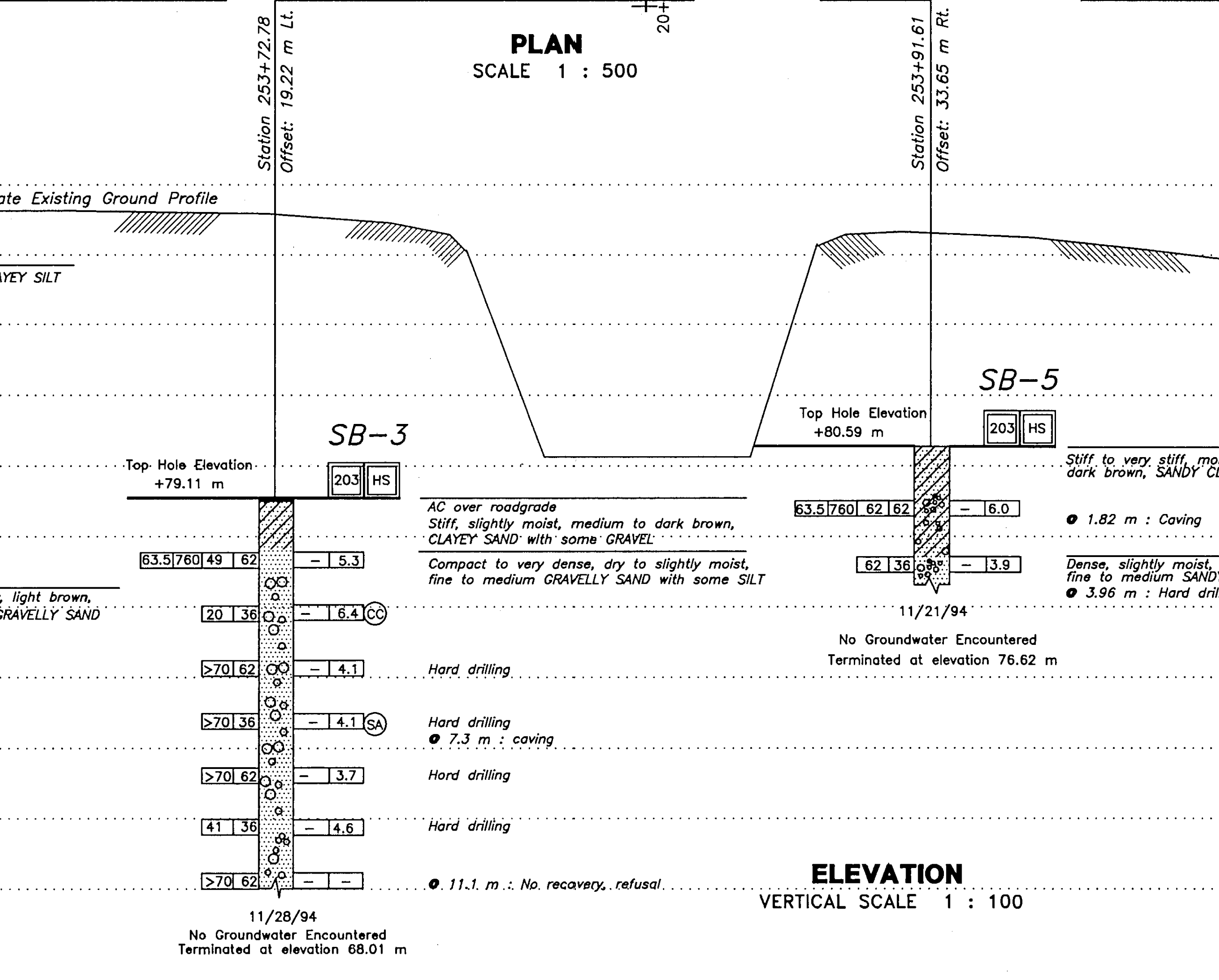
Slightly compact to
fine to medium SA

● 12.20 m : caving

● 14.02 m : No r

12/1/94
No Groundwater Encountered
Terminated at elevation 73.28 m

DESIGN	BY	S. MALHOTRA	CHECKED	K. MARKOUIZOS
DETAILS	BY		CHECKED	
QUANTITIES	BY		CHECKED	



AS BUILT

CONTRACTOR V. FRANCIS

CONTRACT NO. 12-013344


DATE 9/4/01

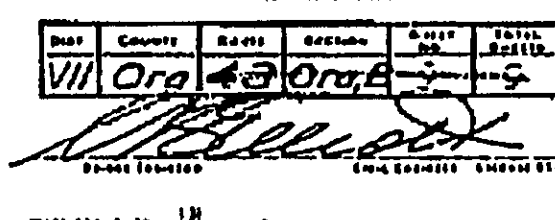
B# 4/14/04

NO AS BUILT CHANGES



Metric





BENCH MARK

B.M. 27-B-54

Set out spike in S side of Euc tree, 1/4 mi. E of Orange Ave., 50' W of house No 17242 on Orange Ave.

ELEV. 267.34

AS BUILT

CORRECTIONS BY: V. FRANCIS

CONTRACT NO. 12-013344

DATE 9/4/01

34. 4/14/04

AS BUILT PLANS
Contract No. 61-7V13C60
Date Completed
Document No. 7000 2331

THIS SET OF PLANS HAS BEEN CORRECTED TO CORRESPOND TO THE "AS BUILT" PRINTS DATED FEB. 15, 1962, AS SUBMITTED BY RESIDENT ENGINEER J.S. BURNS. TRACINGS CORRECTED BY: KGP DATE: 8-15-67

Revisions made to this Log of Test Borings from the original 1962 Log of Test Borings are:

1. ("A" Line) - Metric was added.
2. The bearing for "A" Line was added.
3. "A" Line stations were added.
4. (@ Taft Ave) - METRIC was added.
5. The bearing for @ Taft Ave was added.
6. @ Taft Ave stations were added.
7. "A" Line - Metric stations and offsets.

Boring	Station	Offset (from "A" Line)
B1	253+59.527	10.363m RT
B2	253+47.335	15.850m LT
B3	253+68.976	5.791m LT
B4	253+69.280	15.545m RT
B5	253+74.157	16.459m LT

PILING DATA
Type of pile 10 D.P. 42 STEEL PILING
Bunker data
Pile diam: or: 71p - 24ft -
Pile design load = 45 TON
For the structure:
Number of piles = 14
Est. length of piling = 800.0'
Actual " " " = 761.6'

ABUT. 1

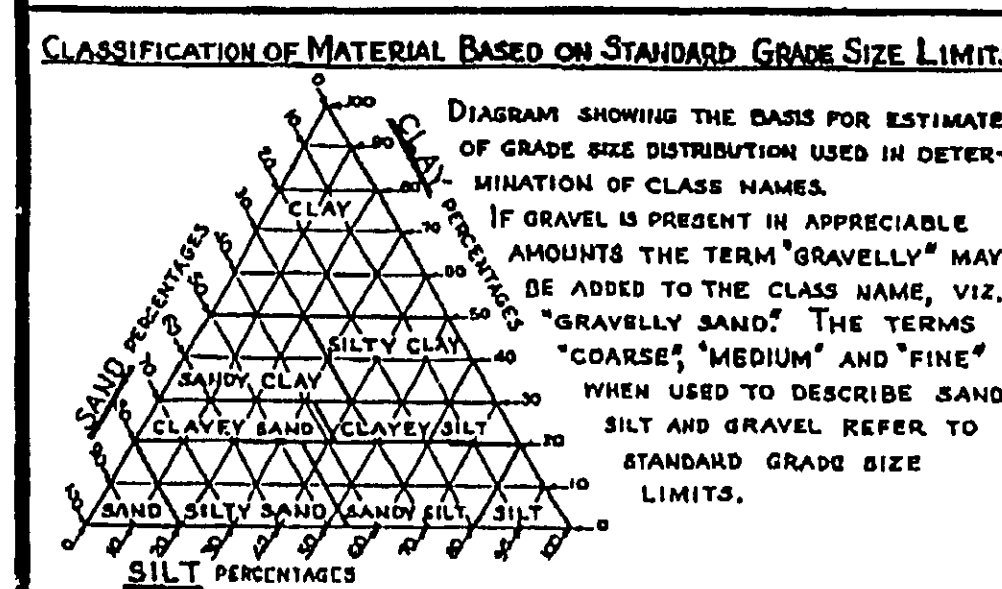
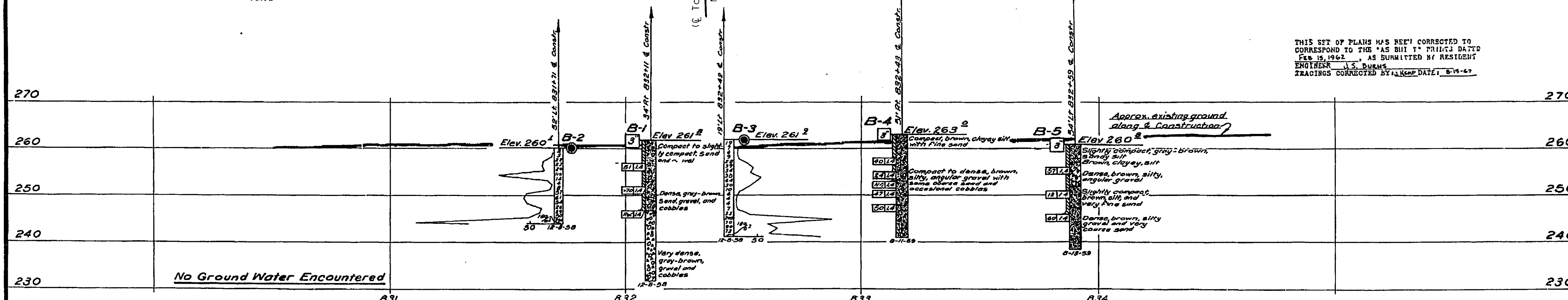
No. of piles in footing of
Actual length of piling
Av. = 32 & Max = 34.7 Min = 29.1
Pile tip elevation:
F. = 248.1 Min = 248.9 Min = 248.4
Spun pile color = 246.0

ABUT. 4

No. of piles in footing of
Actual length of piling
Av. = 30 & Max = 31.5 Min = 30.1
Pile tip elevation:
F. = 247 & Max = 247.5 Min = 246.4
Spun pile color = 246.0

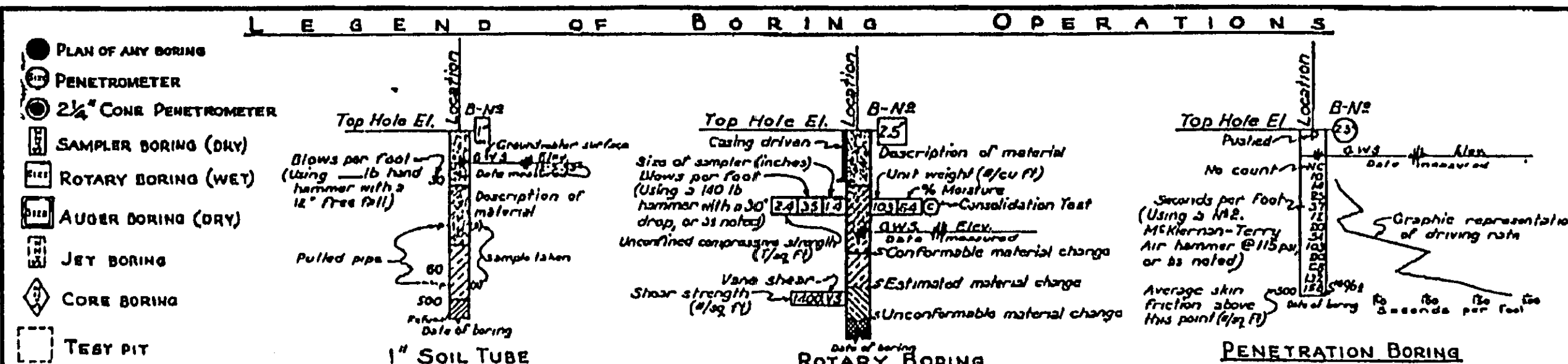
PLAN

@ Orange Ave: NOT TO SCALE
@ Taft Ave) - Metric: NOT TO SCALE



LEGEND OF EARTH MATERIALS

GRAVEL	SILTY CLAY OR CLAYEY SILT
SAND	PEAT AND/OR ORGANIC MATTER
SILT	FILL MATERIAL
CLAY	IGNEOUS ROCK
SANDY CLAY OR CLAYEY SAND	SEDIMENTARY ROCK
SANDY SILT OR SILTY SAND	METAMORPHIC ROCK



NOTES

The contractor's attention is directed to Section 3, Article (4) of the Standard Specifications, and to the Special Provisions accompanying the bid plans.

Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

Orange Ave. Undercrossing

LOG OF TEST BORINGS

Ver. 1"=10'
Scale Horiz. 1"=20'

BRIDGE 55-326 FILE
DRAWING C 230-8

DESIGN OVERSIGHT SIGN OFF DATE 9-16-98	NOTE: ADDITIONAL AS-BUILT FOUNDATION DATA MAY BE AVAILABLE AT THE DIVISION OF NEW TECHNOLOGY, MATERIALS AND RESEARCH 5900 FOLSOM BOULEVARD, SACRAMENTO, CALIFORNIA 95819	DESIGN BY F. KANG	BY K. CHONG	CHECKED G. SARAH	CHECKED G. SARAH	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	GREGORY V. BROWN PROJECT ENGINEER	BRIDGE NO. 55-326 KP (PM) 25.4 (15.8)	TAFT AVENUE UNDERCROSSING (WIDEN) AS-BUILT LOG OF TEST BORINGS	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET 19	OF 19
		QUANTITIES BY T. MORRIS		CHECKED R. KHALAFBEIGI		CU 12211 EA 013341				2/16/98 7/14/02			



APPENDIX B

Laboratory Testing

APPENDIX B

LABORATORY TESTING

Classification

Soils were visually and texturally classified in accordance with the Unified Soil Classification System (USCS) in general accordance with ASTM D 2488. Soil classifications are indicated on the logs of the exploratory borings in Appendix A.

In-Place Moisture and Density Tests

The moisture content and dry density of relatively undisturbed samples obtained from the exploratory borings were evaluated in general accordance with ASTM D 2937. The test results are presented on the logs of the exploratory borings in Appendix A.

Gradation Analysis

Gradation analysis tests were performed on selected representative soil samples in general accordance with ASTM D 422. The grain-size distribution curves are shown on Figures B-1 through B-5. These test results were utilized in evaluating the soil classifications in accordance with the USCS.

200 Wash

An evaluation of the percentage of particles finer than the No. 200 sieve in selected soil samples was performed in general accordance with ASTM D 1140. The results of the tests are presented on Figure B-6.

Atterberg Limits

Tests were performed on selected representative fine-grained soil samples to evaluate the liquid limit, plastic limit, and plasticity index in general accordance with ASTM D 4318. These test results were utilized to evaluate the soil classification in accordance with the USCS. The test results and classifications are shown on Figure B-7.

Direct Shear Tests

Direct shear tests were performed on relatively undisturbed samples in general accordance with ASTM D 3080 to evaluate the shear strength characteristics of selected materials. The samples were inundated during shearing to represent adverse field conditions. The results are shown on Figures B-8 through B-11.

Expansion Index Tests

The expansion index of selected materials was evaluated in general accordance with ASTM D 4829. Specimens were molded under a specified compactive energy at approximately 50 percent saturation (plus or minus 1 percent). The prepared 1-inch thick by 4-inch diameter specimens were loaded with a surcharge of 144 pounds per square foot and were inundated with tap water. Readings of volumetric swell were made for a period of 24 hours. The results of these tests are presented on Figure B-12.

Sand Equivalent

A sand equivalent (SE) test was performed on a selected representative sample in general accordance with CT 217/American Association of State Highway and Transportation Officials (AASHTO) T 176. The SE value reported on Figure B-13 is the ratio of the coarse- to fine-grained particles in the selected samples.

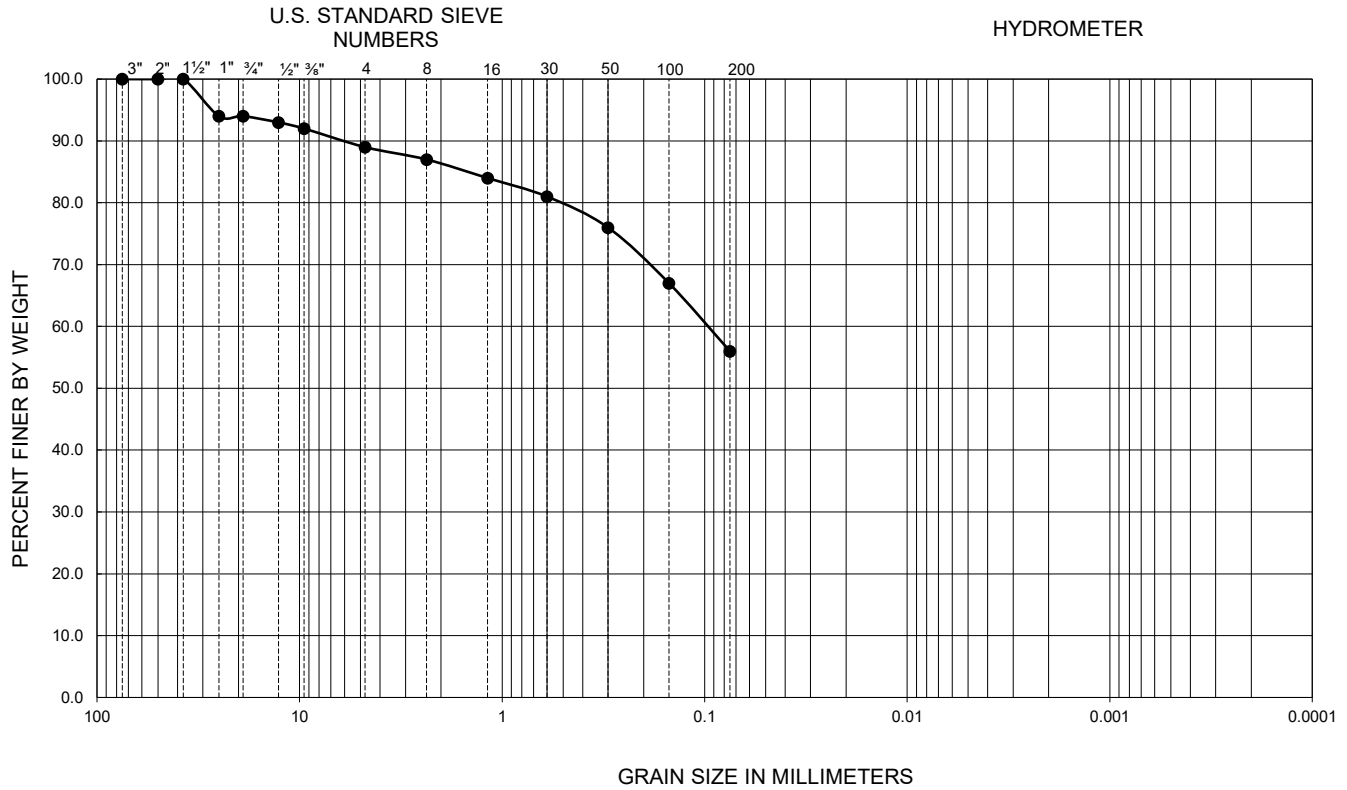
Soil Corrosivity Tests

Soil pH, and resistivity tests were performed on representative soils samples in general accordance with California Test (CT) 643. The soluble sulfate and chloride content of selected samples were evaluated in general accordance with CT 417 and CT 422, respectively. The test results are presented on Figure B-14.

R-Value

The resistance value, or R-value, for site soils was evaluated in general accordance with CT 301. Samples were prepared and evaluated for exudation pressure and expansion pressure. The equilibrium R-value is reported as the lesser or more conservative of the two calculated results. The test results are shown on Figure B-15.

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY

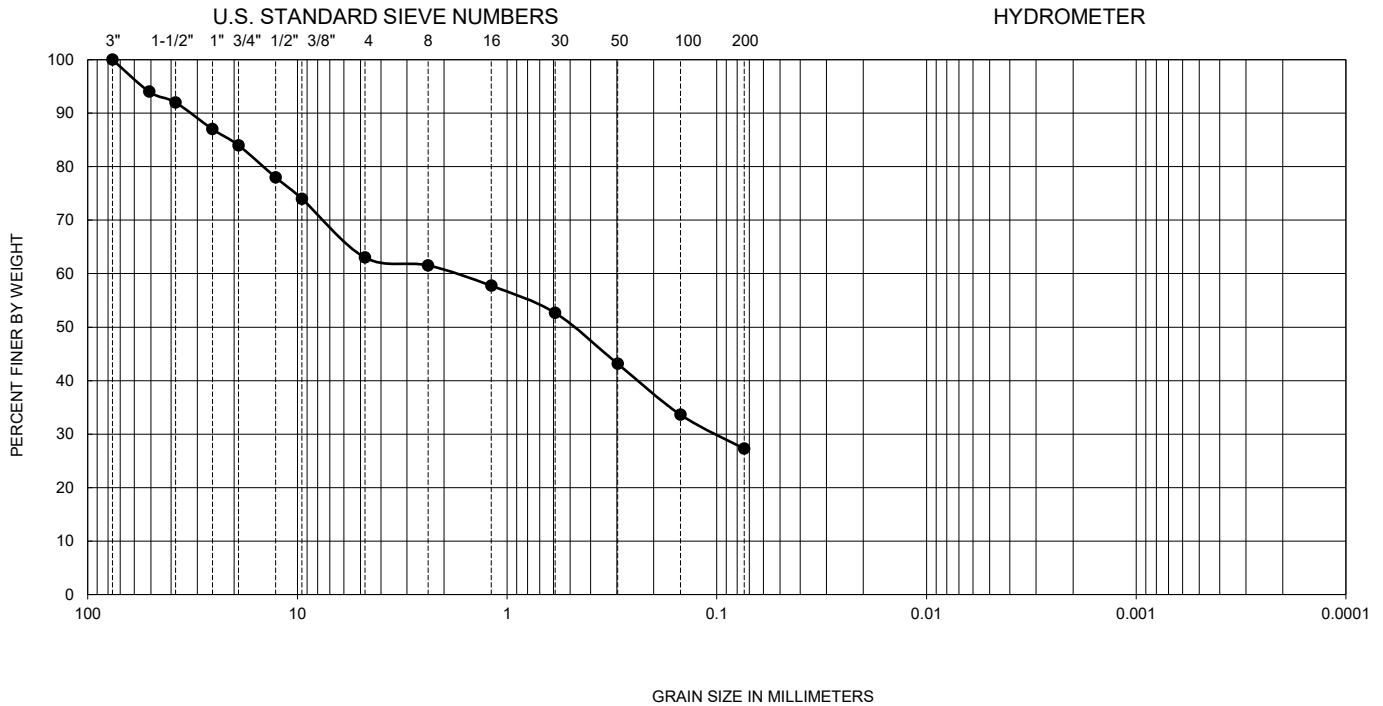


Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D ₁₀	D ₃₀	D ₆₀	C _u	C _c	Passing No. 200 (percent)	USCS
●	B-1	1.5-5.0	--	--	--	--	--	--	--	--	56	CL

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 6913

FIGURE B-1

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY



Symbol	Hole No.	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D ₁₀	D ₃₀	D ₆₀	C _u	C _c	Passing No. 200 (percent)	USCS
●	B-8	1.5-5.0	--	--	--	--	--	--	--	--	27	SM

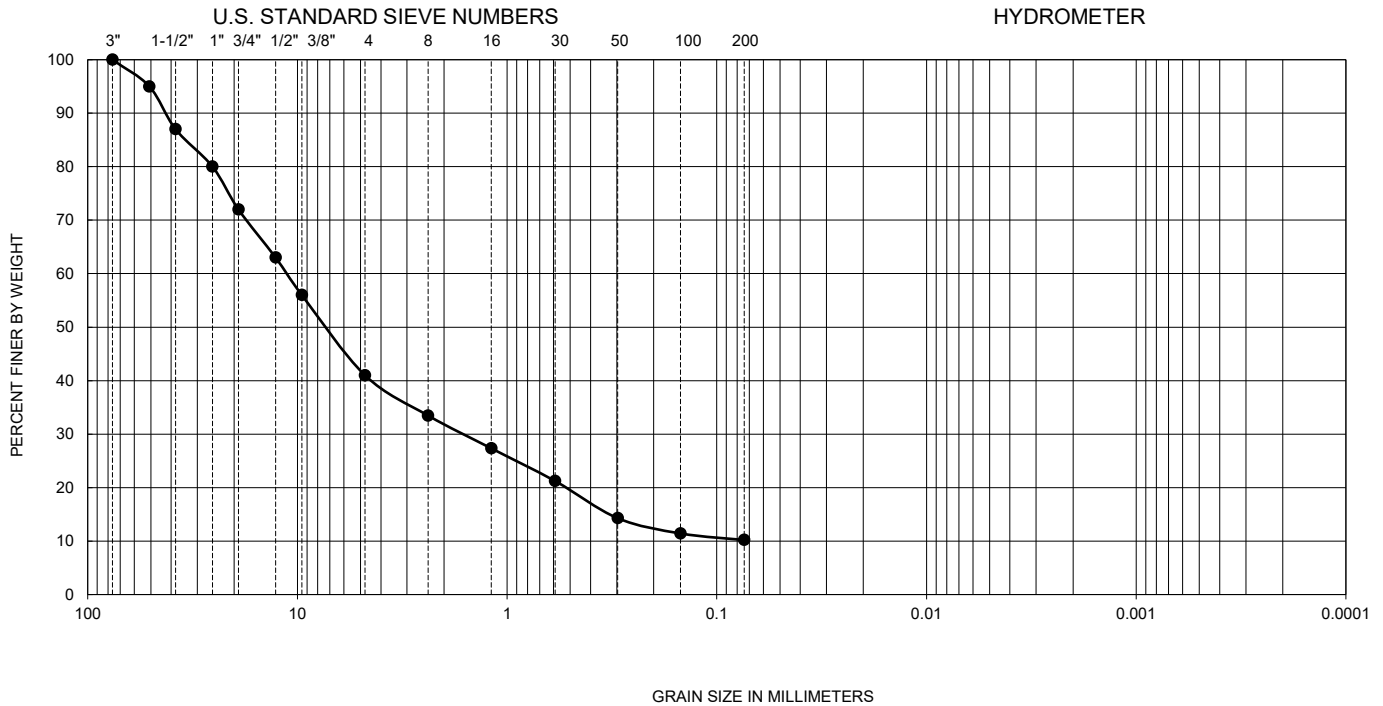
PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

FIGURE B-2

GRADATION TEST RESULTS

Taft Branch Improvements Project
Orange County Sanitation District, Orange, California

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY



Symbol	Hole No.	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D ₁₀	D ₃₀	D ₆₀	C _u	C _c	Passing No. 200 (percent)	USCS
●	B-14	1.0-5.0	--	--	--	0.07	1.45	11.34	153.2	2.5	10	GP-GC

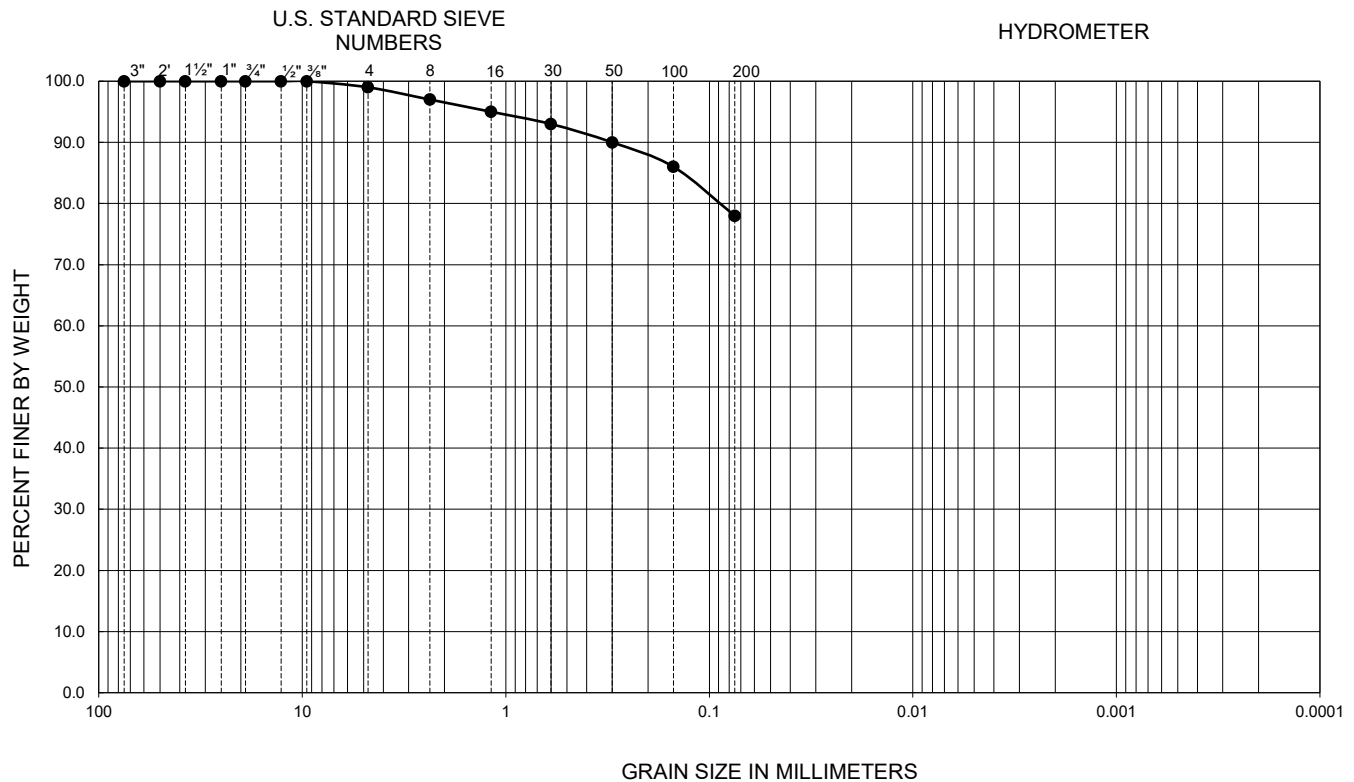
PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

FIGURE B-3

GRADATION TEST RESULTS

Taft Branch Improvements Project
Orange County Sanitation District, Orange, California

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY

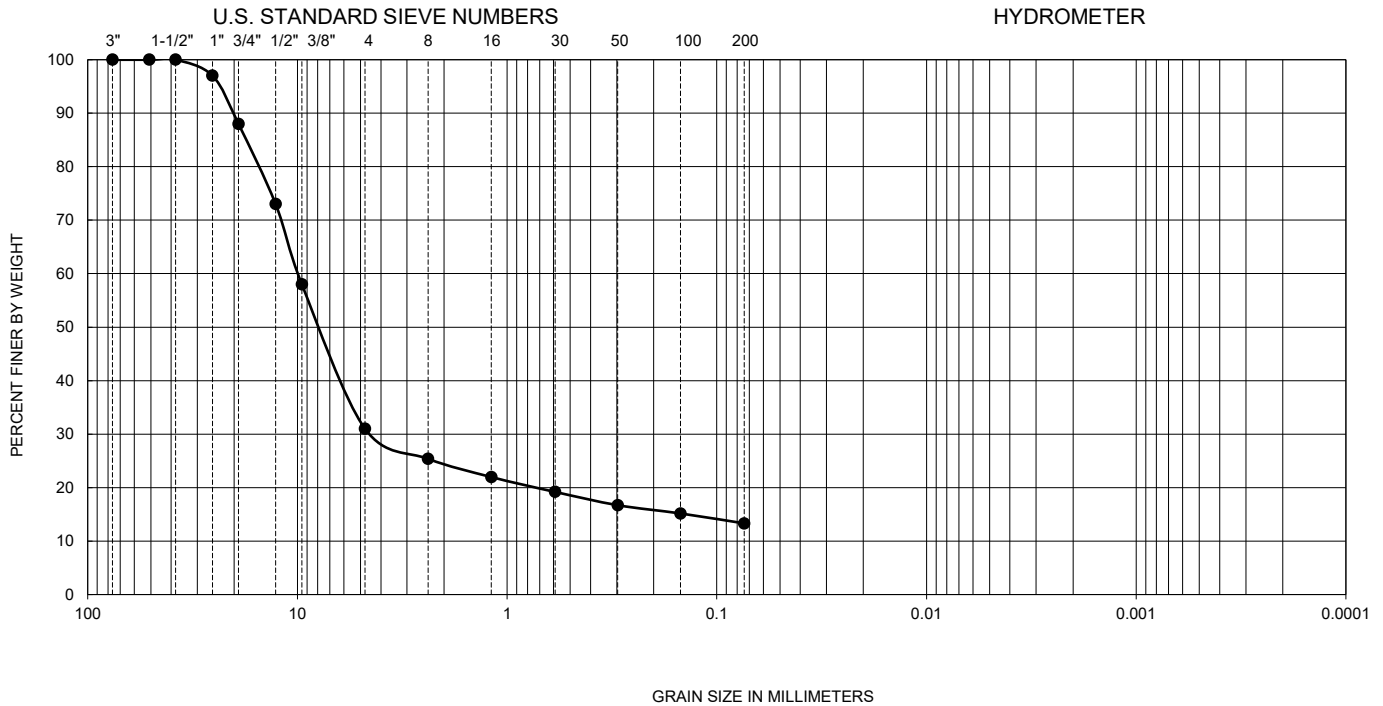


Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D ₁₀	D ₃₀	D ₆₀	C _u	C _c	Passing No. 200 (percent)	USCS
●	B-16	1.0-5.0	46	15	31	--	--	--	--	--	78	CL

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 6913

FIGURE B-4

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY



Symbol	Hole No.	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D ₁₀	D ₃₀	D ₆₀	C _u	C _c	Passing No. 200 (percent)	USCS
●	B-16	9.0-15.0	--	--	--	--	--	--	--	--	13	GM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

FIGURE B-5

GRADATION TEST RESULTS

Taft Branch Improvements Project
Orange County Sanitation District, Orange, California

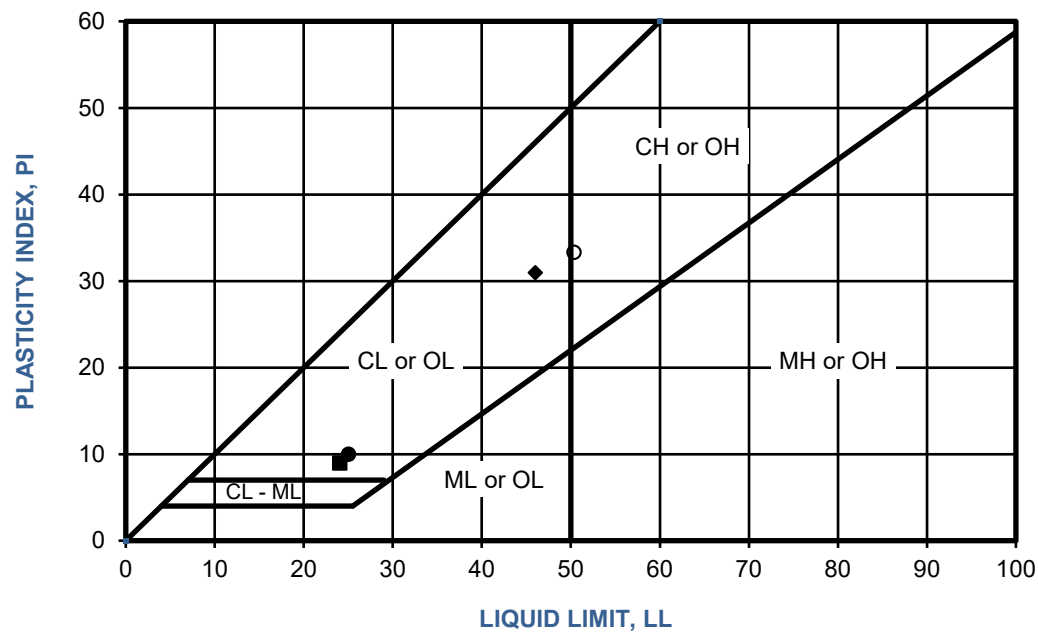
SAMPLE LOCATION	SAMPLE DEPTH (ft)	DESCRIPTION	PERCENT PASSING NO. 4	PERCENT PASSING NO. 200	USCS (TOTAL SAMPLE)
B-4	1.5-5.0	LEAN CLAY	86	53	CL
B-15	1.0-5.0	LEAN CLAY	99	83	CL
B-17	1.0-5.0	LEAN CLAY	99	71	CL
B-18	9.0-15.0	FAT CLAY	100	86	CH

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 1140

FIGURE B-6

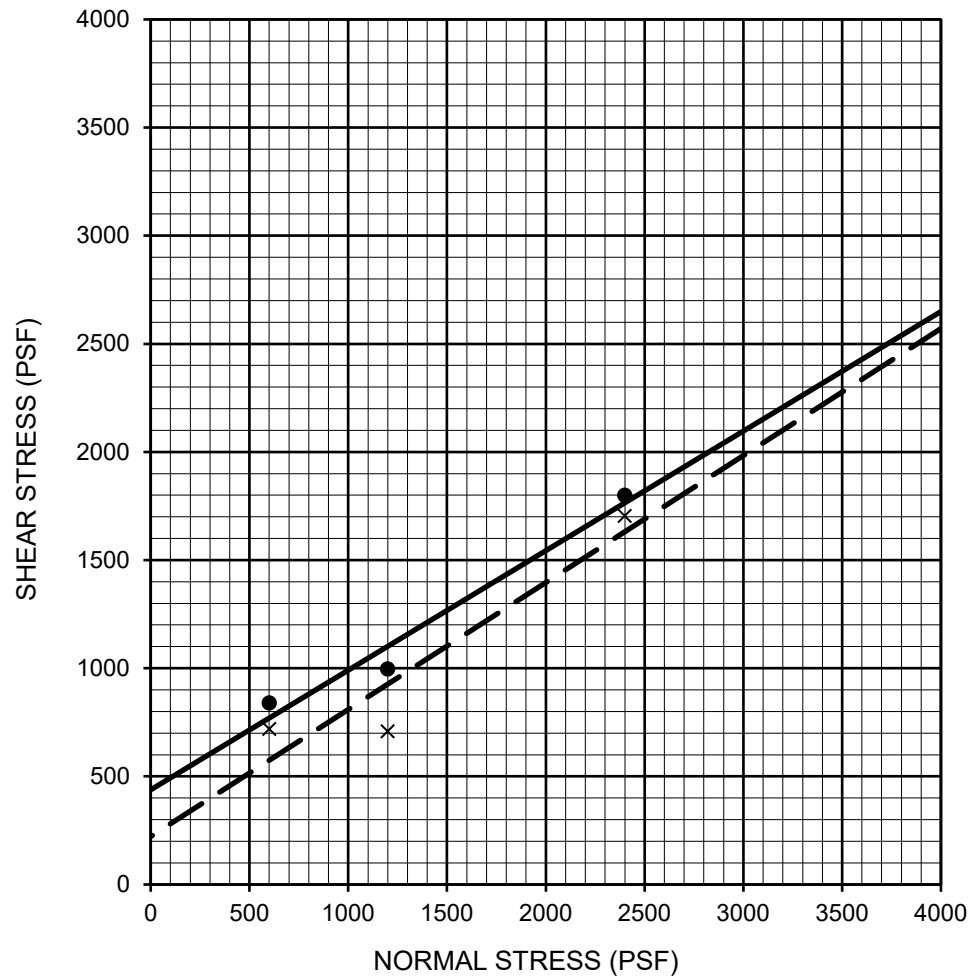
SYMBOL	LOCATION	DEPTH (ft)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	USCS CLASSIFICATION (Fraction Finer Than No. 40 Sieve)	USCS
●	B-7	1.0-4.5	25	15	10	CL	CL
■	B-11	2.0-3.0	24	15	9	CL	SC
◆	B-16	1.0-5.0	46	15	31	CL	CL
○	B-18	7.0-8.5	50	17	33	CH	CH

NP - INDICATES NON-PLASTIC



PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 4318

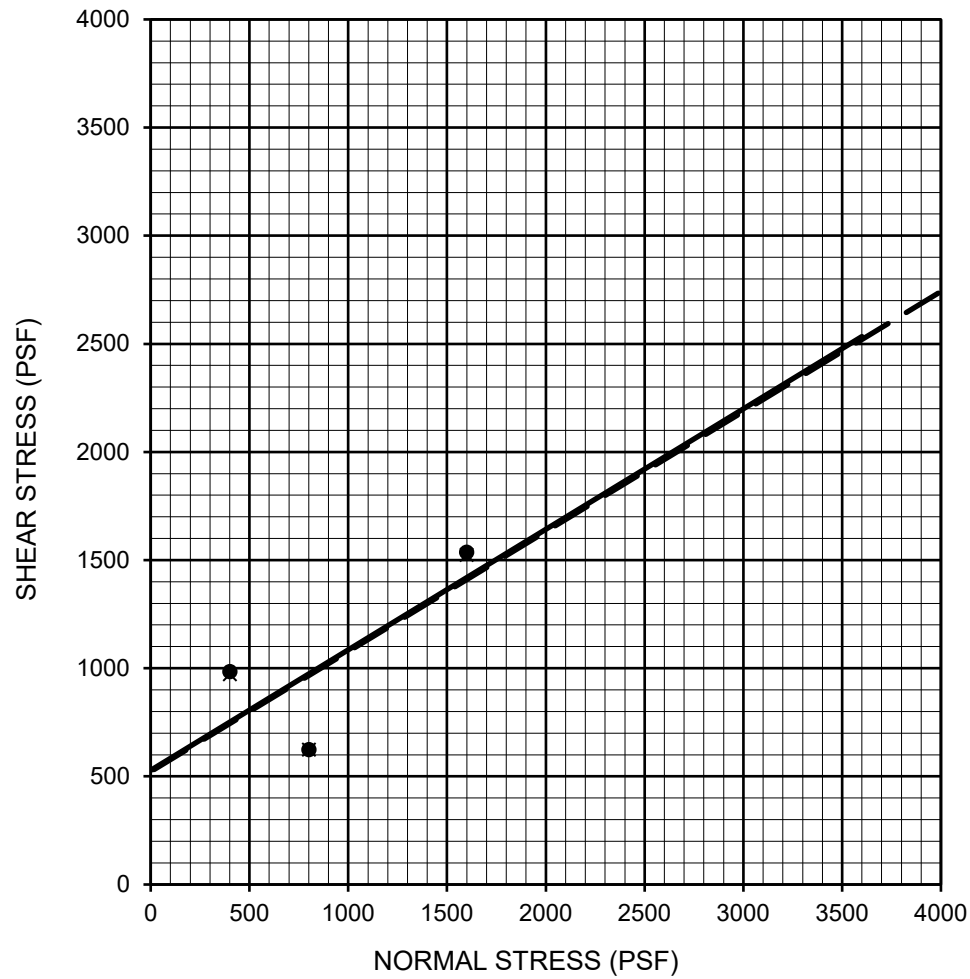
FIGURE B-7



Description	Symbol	Sample Location	Depth (ft)	Shear Strength	Cohesion (psf)	Friction Angle (degrees)	Soil Type
LEAN CLAY	—●—	B-2	9.0-10.5	Peak	438	29	CL
LEAN CLAY	- - X - -	B-2	9.0-10.5	Ultimate	222	30	CL

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 3080

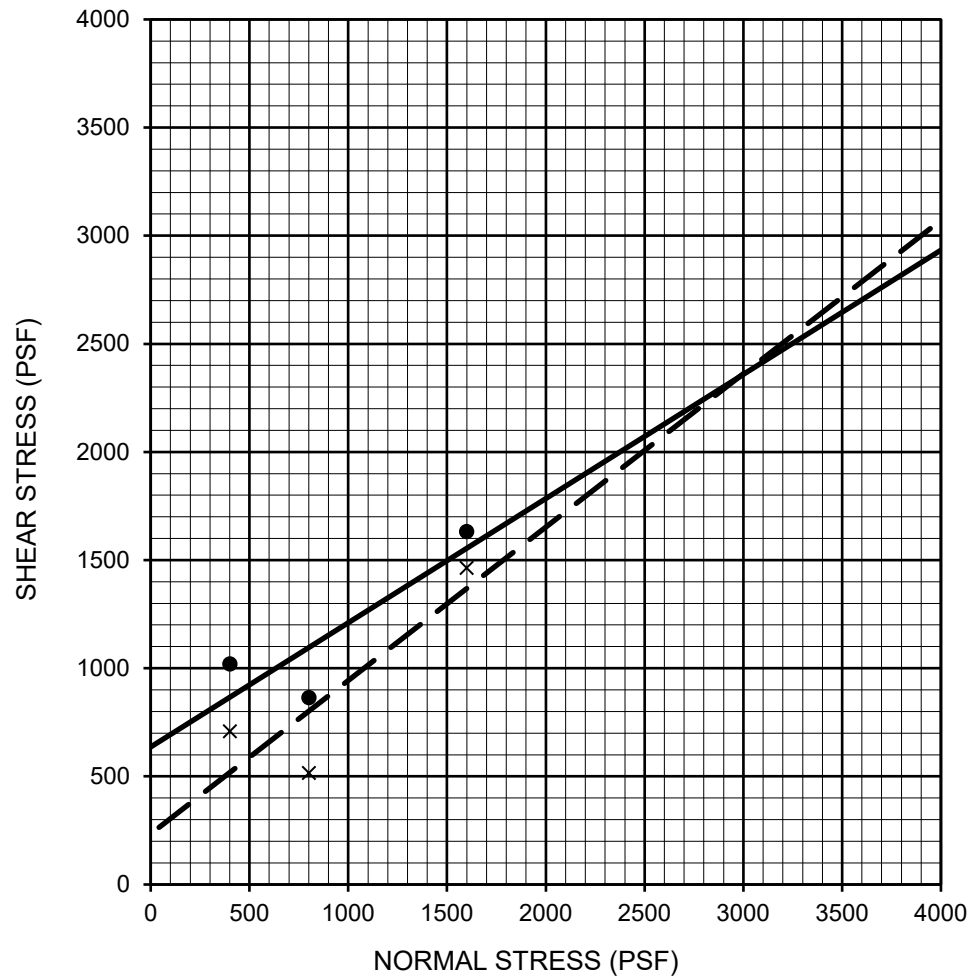
FIGURE B-8



Description	Symbol	Sample Location	Depth (ft)	Shear Strength	Cohesion (psf)	Friction Angle (degrees)	Soil Type
CLAYEY SAND	—●—	B-8	5.0-6.5	Peak	528	29	SC
CLAYEY SAND	- - X - -	B-8	5.0-6.5	Ultimate	522	29	SC

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 3080

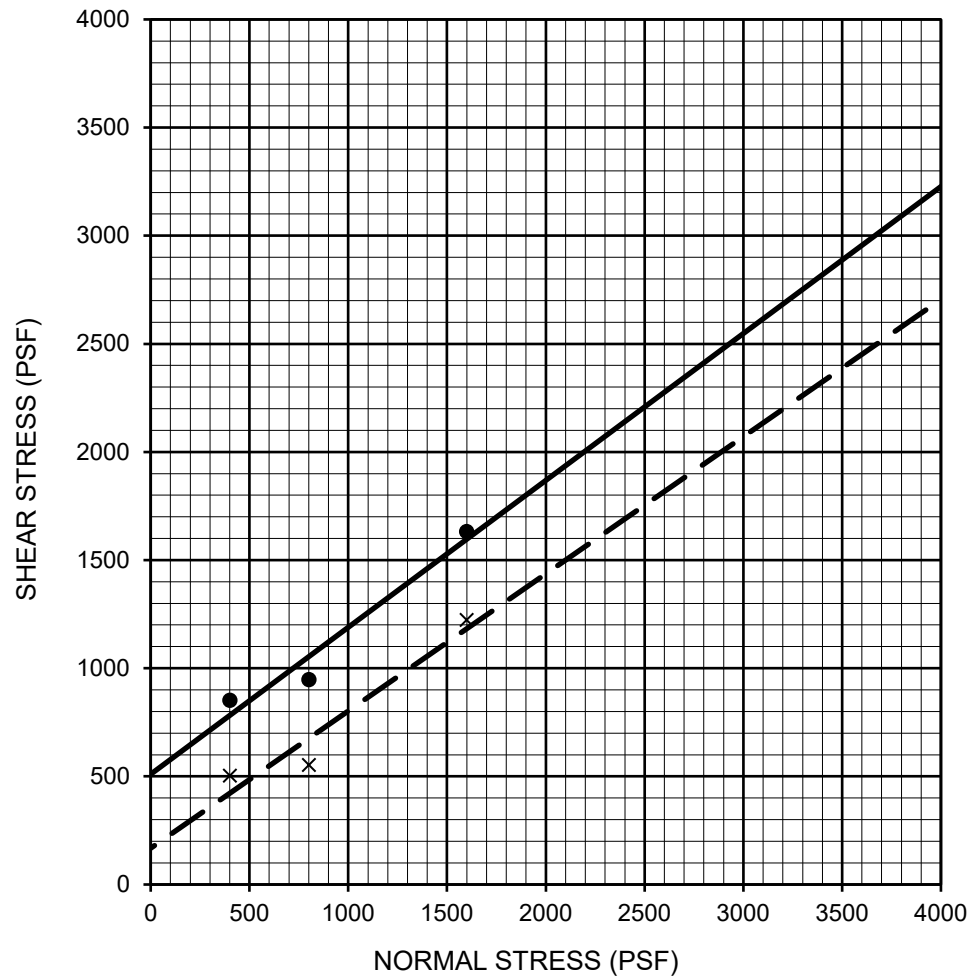
FIGURE B-9



Description	Symbol	Sample Location	Depth (ft)	Shear Strength	Cohesion (psf)	Friction Angle (degrees)	Soil Type
LEAN CLAY	—●—	B-16	5.0-6.5	Peak	636	30	CL
LEAN CLAY	- - X - -	B-16	5.0-6.5	Ultimate	234	35	CL

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 3080

FIGURE B-10



Description	Symbol	Sample Location	Depth (ft)	Shear Strength	Cohesion (psf)	Friction Angle (degrees)	Soil Type
LEAN CLAY	—●—	B-20	5.0-6.5	Peak	510	34	CL
LEAN CLAY	- - X - -	B-20	5.0-6.5	Ultimate	168	32	CL

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 3080

FIGURE B-11

DIRECT SHEAR TEST RESULTS

TAFT BRANCH IMPROVEMENTS PROJECT
ORANGE COUNTY SANITATION DISTRICT, ORANGE, CALIFORNIA

211663001 | 6/23

SAMPLE LOCATION	SAMPLE DEPTH (ft)	INITIAL MOISTURE (percent)	COMPACTED DRY DENSITY (pcf)	FINAL MOISTURE (percent)	VOLUMETRIC SWELL (in)	EXPANSION INDEX	POTENTIAL EXPANSION
B-15	1.0-5.0	13.5	98.0	29.5	0.057	57	Medium
B-18	1.0-5.0	13.2	99.4	27.1	0.028	28	Low

PERFORMED IN GENERAL ACCORDANCE WITH

☐ UBC STANDARD 18-2

☒ ASTM D 4829

FIGURE B-12

SAMPLE LOCATION	SAMPLE DEPTH (ft)	SOIL TYPE	SAND EQUIVALENT
B-14	1.0-5.0	GP-GC	19
B-16	9.0-15.0	GM	14

PERFORMED IN GENERAL ACCORDANCE WITH AASHTO T176/CT 217

FIGURE B-13

SAND EQUIVALENT VALUE

Taft Branch Improvements Project
Orange County Sanitation District, Orange, California

SAMPLE LOCATION	SAMPLE DEPTH (ft)	pH ¹	RESISTIVITY ¹ (ohm-cm)	SULFATE CONTENT ²		CHLORIDE CONTENT ³ (ppm)
				(ppm)	(%)	
B-1	9.0-15.0	8.0	1,424	50	0.005	115
B-11	3.0-5.0	7.5	634	30	0.003	50
B-16	1.0-5.0	7.8	596	40	0.004	45
B-18	1.0-5.0	7.5	634	40	0.004	70

¹ PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 643

² PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 417

³ PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 422

FIGURE B-14

SAMPLE LOCATION	SAMPLE DEPTH (ft)	SOIL TYPE	R-VALUE
B-1	1.5-5.0	CL	27
B-17	1.0-5.0	CL	6

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 2844/CT 301

FIGURE B-15

R-VALUE TEST RESULTS

TAFT BRANCH IMPROVEMENTS PROJECT
ORANGE COUNTY SANITATION DISTRICT, ORANGE, CALIFORNIA

211663001 | 6/23



APPENDIX C

Analytical Testing



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27 April 2022

Jennifer Schmidt
Ninyo & Moore
475 Goddard, Ste. 200
Irvine, CA 92618
RE: OCSAN / Taft Sewer Project

Enclosed are the results of analyses for samples received by the laboratory on 04/20/22 10:26. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Taili Linuma
Project Manager



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Ninyo & Moore
475 Goddard, Ste. 200
Irvine CA, 92618

Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-10-0-3.5	T221151-01	Soil	04/07/22 11:38	04/20/22 10:26
B-10-5-6.5	T221151-02	Soil	04/07/22 11:45	04/20/22 10:26
B-10-19-20.5	T221151-03	Soil	04/07/22 13:10	04/20/22 10:26
B-9-7-9	T221151-04	Soil	04/08/22 10:34	04/20/22 10:26
B-8-1.3-2.3	T221151-05	Soil	04/08/22 12:30	04/20/22 10:26
Drum # 1-B-8-B-9-B-10	T221151-06	Soil	04/08/22 12:56	04/20/22 10:26
Drum # 2-B-8-B-9-B-10	T221151-07	Soil	04/08/22 14:00	04/20/22 10:26
Composite 7:1 Drum # 3-B-8-B-9-B-10 - Drum # 9-E	T221151-22	Soil	04/12/22 10:30	04/20/22 10:26
Composite 7:1 Drum # 10-B-14 - Drum # 16-B-20	T221151-23	Soil	04/15/22 11:20	04/20/22 10:26

SunStar Laboratories, Inc.

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Taili Iinuma, Project Manager



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Irvine CA, 92618

Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

DETECTIONS SUMMARY

Sample ID: B-10-0-3.5

Laboratory ID: T221151-01

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
Barium	87	1.0	mg/kg	EPA 6010b	
Chromium	12	2.0	mg/kg	EPA 6010b	
Cobalt	5.9	2.0	mg/kg	EPA 6010b	
Copper	12	1.0	mg/kg	EPA 6010b	
Lead	5.3	3.0	mg/kg	EPA 6010b	
Nickel	9.5	2.0	mg/kg	EPA 6010b	
Vanadium	27	5.0	mg/kg	EPA 6010b	
Zinc	40	1.0	mg/kg	EPA 6010b	

Sample ID: B-10-5-6.5

Laboratory ID: T221151-02

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
Barium	77	1.0	mg/kg	EPA 6010b	
Chromium	9.2	2.0	mg/kg	EPA 6010b	
Cobalt	5.1	2.0	mg/kg	EPA 6010b	
Copper	9.7	1.0	mg/kg	EPA 6010b	
Lead	4.5	3.0	mg/kg	EPA 6010b	
Nickel	7.6	2.0	mg/kg	EPA 6010b	
Vanadium	23	5.0	mg/kg	EPA 6010b	
Zinc	34	1.0	mg/kg	EPA 6010b	

Sample ID: B-10-19-20.5

Laboratory ID: T221151-03

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
C29-C40 (MORO)	22	10	mg/kg	EPA 8015B	D-06
Barium	61	1.0	mg/kg	EPA 6010b	
Chromium	16	2.0	mg/kg	EPA 6010b	
Cobalt	4.1	2.0	mg/kg	EPA 6010b	
Copper	12	1.0	mg/kg	EPA 6010b	
Lead	4.1	3.0	mg/kg	EPA 6010b	
Nickel	7.1	2.0	mg/kg	EPA 6010b	

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Sample ID: B-10-19-20.5

Laboratory ID: T221151-03

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
Vanadium	19	5.0	mg/kg	EPA 6010b	
Zinc	35	1.0	mg/kg	EPA 6010b	

Sample ID: B-9-7-9

Laboratory ID: T221151-04

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
C13-C28 (DRO)	17	10	mg/kg	EPA 8015B	D-09
C29-C40 (MORO)	170	10	mg/kg	EPA 8015B	D-06
Barium	68	1.0	mg/kg	EPA 6010b	
Chromium	10	2.0	mg/kg	EPA 6010b	
Cobalt	5.0	2.0	mg/kg	EPA 6010b	
Copper	11	1.0	mg/kg	EPA 6010b	
Lead	4.7	3.0	mg/kg	EPA 6010b	
Nickel	7.8	2.0	mg/kg	EPA 6010b	
Vanadium	21	5.0	mg/kg	EPA 6010b	
Zinc	36	1.0	mg/kg	EPA 6010b	
Acetone	6.1	5.0	ug/kg	EPA 8260B	

Sample ID: B-8-1.3-2.3

Laboratory ID: T221151-05

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
C29-C40 (MORO)	23	10	mg/kg	EPA 8015B	D-06, RE-03
Barium	84	1.0	mg/kg	EPA 6010b	
Chromium	12	2.0	mg/kg	EPA 6010b	
Cobalt	6.0	2.0	mg/kg	EPA 6010b	
Copper	11	1.0	mg/kg	EPA 6010b	
Lead	4.1	3.0	mg/kg	EPA 6010b	
Nickel	8.7	2.0	mg/kg	EPA 6010b	
Vanadium	27	5.0	mg/kg	EPA 6010b	
Zinc	41	1.0	mg/kg	EPA 6010b	
Acetone	13	5.0	ug/kg	EPA 8260B	

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Sample ID: Drum # 1-B-8-B-9-B-10

Laboratory ID: T221151-06

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
C13-C28 (DRO)	23	10		mg/kg	EPA 8015B	
C29-C40 (MORO)	310	10		mg/kg	EPA 8015B	D-06
Barium	65	1.0		mg/kg	EPA 6010b	
Chromium	12	2.0		mg/kg	EPA 6010b	
Cobalt	4.9	2.0		mg/kg	EPA 6010b	
Copper	13	1.0		mg/kg	EPA 6010b	
Lead	5.3	3.0		mg/kg	EPA 6010b	
Nickel	8.1	2.0		mg/kg	EPA 6010b	
Vanadium	24	5.0		mg/kg	EPA 6010b	
Zinc	41	1.0		mg/kg	EPA 6010b	
Acetone	10	5.0		ug/kg	EPA 8260B	

Sample ID: Drum # 2-B-8-B-9-B-10

Laboratory ID: T221151-07

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Barium	96	1.0		mg/kg	EPA 6010b	
Chromium	10	2.0		mg/kg	EPA 6010b	
Cobalt	6.4	2.0		mg/kg	EPA 6010b	
Copper	14	1.0		mg/kg	EPA 6010b	
Lead	6.2	3.0		mg/kg	EPA 6010b	
Nickel	9.3	2.0		mg/kg	EPA 6010b	
Vanadium	26	5.0		mg/kg	EPA 6010b	
Zinc	47	1.0		mg/kg	EPA 6010b	

Sample ID: Composite 7:1 Drum # 3-B-8-B-9-B-10

Laboratory ID: T221151-22

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Barium	63	1.0		mg/kg	EPA 6010b	
Chromium	11	2.0		mg/kg	EPA 6010b	
Cobalt	5.2	2.0		mg/kg	EPA 6010b	
Copper	11	1.0		mg/kg	EPA 6010b	
Lead	4.9	3.0		mg/kg	EPA 6010b	
Nickel	8.3	2.0		mg/kg	EPA 6010b	
Vanadium	21	5.0		mg/kg	EPA 6010b	
Zinc	39	1.0		mg/kg	EPA 6010b	

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Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Sample ID: Composite 7:1 Drum # 3-B-8-B-9-B-10 Laboratory ID: T221151-22

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Acetone	12	5.0		ug/kg	EPA 8260B	

Sample ID: Composite 7:1 Drum # 10-B-14 - Drum Laboratory ID: T221151-23

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Barium	63	1.0		mg/kg	EPA 6010b	
Chromium	8.6	2.0		mg/kg	EPA 6010b	
Cobalt	3.5	2.0		mg/kg	EPA 6010b	
Copper	8.1	1.0		mg/kg	EPA 6010b	
Nickel	6.8	2.0		mg/kg	EPA 6010b	
Vanadium	17	5.0		mg/kg	EPA 6010b	
Zinc	23	1.0		mg/kg	EPA 6010b	

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-10-0-3.5
T221151-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015B

C6-C12 (GRO)	ND	10	mg/kg	1	22D0261	04/20/22	04/22/22	EPA 8015B	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		93.3 %	65-135		"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	22D0252	04/19/22	04/26/22	EPA 6010b	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	87	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	12	2.0	"	"	"	"	"	"	
Cobalt	5.9	2.0	"	"	"	"	"	"	
Copper	12	1.0	"	"	"	"	"	"	
Lead	5.3	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	9.5	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	5.0	"	"	"	"	"	"	
Vanadium	27	5.0	"	"	"	"	"	"	
Zinc	40	1.0	"	"	"	"	"	"	
Boron	ND	5.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	ND	0.10	mg/kg	1	22D0262	04/20/22	04/26/22	EPA 7471A Soil	
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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-10-0-3.5
T221151-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	2.5	ug/kg	1	22D0308	04/19/22	04/25/22	EPA 8260B
Bromochloromethane	ND	2.5	"	"	"	"	"	"
Bromodichloromethane	ND	2.5	"	"	"	"	"	"
Bromoform	ND	2.5	"	"	"	"	"	"
Bromomethane	ND	2.5	"	"	"	"	"	"
n-Butylbenzene	ND	2.5	"	"	"	"	"	"
sec-Butylbenzene	ND	2.5	"	"	"	"	"	"
tert-Butylbenzene	ND	2.5	"	"	"	"	"	"
Carbon tetrachloride	ND	2.5	"	"	"	"	"	"
Chlorobenzene	ND	2.5	"	"	"	"	"	"
Chloroethane	ND	2.5	"	"	"	"	"	"
Chloroform	ND	2.5	"	"	"	"	"	"
Chloromethane	ND	2.5	"	"	"	"	"	"
2-Chlorotoluene	ND	2.5	"	"	"	"	"	"
4-Chlorotoluene	ND	2.5	"	"	"	"	"	"
Dibromochloromethane	ND	2.5	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	2.5	"	"	"	"	"	"
Dibromomethane	ND	2.5	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
Dichlorodifluoromethane	ND	2.5	"	"	"	"	"	"
1,1-Dichloroethane	ND	2.5	"	"	"	"	"	"
1,2-Dichloroethane	ND	2.5	"	"	"	"	"	"
1,1-Dichloroethene	ND	2.5	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	2.5	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	2.5	"	"	"	"	"	"
1,2-Dichloropropane	ND	2.5	"	"	"	"	"	"
1,3-Dichloropropane	ND	2.5	"	"	"	"	"	"
2,2-Dichloropropane	ND	2.5	"	"	"	"	"	"
1,1-Dichloropropene	ND	2.5	"	"	"	"	"	"

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-10-0-3.5
T221151-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

cis-1,3-Dichloropropene	ND	2.5	ug/kg	1	22D0308	04/19/22	04/25/22	EPA 8260B	
trans-1,3-Dichloropropene	ND	2.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.5	"	"	"	"	"	"	
Isopropylbenzene	ND	2.5	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.5	"	"	"	"	"	"	
Methylene chloride	ND	10	"	"	"	"	"	"	
Naphthalene	ND	2.5	"	"	"	"	"	"	
n-Propylbenzene	ND	2.5	"	"	"	"	"	"	
Styrene	ND	2.5	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.5	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.5	"	"	"	"	"	"	
Tetrachloroethene	ND	2.5	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.5	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.5	"	"	"	"	"	"	
Trichloroethene	ND	2.5	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.5	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.5	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.5	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.5	"	"	"	"	"	"	
Vinyl chloride	ND	2.5	"	"	"	"	"	"	
Benzene	ND	2.5	"	"	"	"	"	"	
Toluene	ND	2.5	"	"	"	"	"	"	
Ethylbenzene	ND	2.5	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	2.5	"	"	"	"	"	"	
Acetone	ND	5.0	"	"	"	"	"	"	
Methyl ethyl ketone	ND	5.0	"	"	"	"	"	"	
Methyl isobutyl ketone	ND	5.0	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	5.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	75.4-139		"	"	"	"	

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Taili Iinuma, Project Manager



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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-10-0-3.5
T221151-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Surrogate: Dibromofluoromethane	110 %	73.1-125	22D0308	04/19/22	04/25/22	EPA 8260B
Surrogate: Toluene-d8	95.4 %	82.6-117	"	"	"	"

SunStar Laboratories, Inc.

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Taili Iinuma, Project Manager



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Irvine CA, 92618

Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-10-5-6.5
T221151-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015B

C6-C12 (GRO)	ND	10	mg/kg	1	22D0261	04/20/22	04/22/22	EPA 8015B	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		96.8 %	65-135		"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	22D0252	04/19/22	04/26/22	EPA 6010b	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	77	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	04/26/22	"	
Cadmium	ND	2.0	"	"	"	"	04/26/22	"	
Chromium	9.2	2.0	"	"	"	"	"	"	
Cobalt	5.1	2.0	"	"	"	"	"	"	
Copper	9.7	1.0	"	"	"	"	"	"	
Lead	4.5	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	7.6	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	5.0	"	"	"	"	"	"	
Vanadium	23	5.0	"	"	"	"	"	"	
Zinc	34	1.0	"	"	"	"	"	"	
Boron	ND	5.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	ND	0.10	mg/kg	1	22D0262	04/20/22	04/26/22	EPA 7471A Soil	
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SunStar Laboratories, Inc.

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-10-5-6.5
T221151-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	2.5	ug/kg	1	22D0308	04/19/22	04/25/22	EPA 8260B
Bromochloromethane	ND	2.5	"	"	"	"	"	"
Bromodichloromethane	ND	2.5	"	"	"	"	"	"
Bromoform	ND	2.5	"	"	"	"	"	"
Bromomethane	ND	2.5	"	"	"	"	"	"
n-Butylbenzene	ND	2.5	"	"	"	"	"	"
sec-Butylbenzene	ND	2.5	"	"	"	"	"	"
tert-Butylbenzene	ND	2.5	"	"	"	"	"	"
Carbon tetrachloride	ND	2.5	"	"	"	"	"	"
Chlorobenzene	ND	2.5	"	"	"	"	"	"
Chloroethane	ND	2.5	"	"	"	"	"	"
Chloroform	ND	2.5	"	"	"	"	"	"
Chloromethane	ND	2.5	"	"	"	"	"	"
2-Chlorotoluene	ND	2.5	"	"	"	"	"	"
4-Chlorotoluene	ND	2.5	"	"	"	"	"	"
Dibromochloromethane	ND	2.5	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	2.5	"	"	"	"	"	"
Dibromomethane	ND	2.5	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
Dichlorodifluoromethane	ND	2.5	"	"	"	"	"	"
1,1-Dichloroethane	ND	2.5	"	"	"	"	"	"
1,2-Dichloroethane	ND	2.5	"	"	"	"	"	"
1,1-Dichloroethene	ND	2.5	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	2.5	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	2.5	"	"	"	"	"	"
1,2-Dichloropropane	ND	2.5	"	"	"	"	"	"
1,3-Dichloropropane	ND	2.5	"	"	"	"	"	"
2,2-Dichloropropane	ND	2.5	"	"	"	"	"	"
1,1-Dichloropropene	ND	2.5	"	"	"	"	"	"

SunStar Laboratories, Inc.

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-10-5-6.5
T221151-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

cis-1,3-Dichloropropene	ND	2.5	ug/kg	1	22D0308	04/19/22	04/25/22	EPA 8260B	
trans-1,3-Dichloropropene	ND	2.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.5	"	"	"	"	"	"	
Isopropylbenzene	ND	2.5	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.5	"	"	"	"	"	"	
Methylene chloride	ND	10	"	"	"	"	"	"	
Naphthalene	ND	2.5	"	"	"	"	"	"	
n-Propylbenzene	ND	2.5	"	"	"	"	"	"	
Styrene	ND	2.5	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.5	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.5	"	"	"	"	"	"	
Tetrachloroethene	ND	2.5	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.5	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.5	"	"	"	"	"	"	
Trichloroethene	ND	2.5	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.5	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.5	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.5	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.5	"	"	"	"	"	"	
Vinyl chloride	ND	2.5	"	"	"	"	"	"	
Benzene	ND	2.5	"	"	"	"	"	"	
Toluene	ND	2.5	"	"	"	"	"	"	
Ethylbenzene	ND	2.5	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	2.5	"	"	"	"	"	"	
Acetone	ND	5.0	"	"	"	"	"	"	
Methyl ethyl ketone	ND	5.0	"	"	"	"	"	"	
Methyl isobutyl ketone	ND	5.0	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	5.0	"	"	"	"	"	"	

Surrogate: 4-Bromofluorobenzene 106 % 75.4-139 " " " "

SunStar Laboratories, Inc.

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-10-5-6.5

T221151-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Surrogate: Dibromofluoromethane	106 %	73.1-125	22D0308	04/19/22	04/25/22	EPA 8260B
Surrogate: Toluene-d8	96.2 %	82.6-117	"	"	"	"

SunStar Laboratories, Inc.

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-10-19-20.5
T221151-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015B

C6-C12 (GRO)	ND	10	mg/kg	1	22D0261	04/20/22	04/22/22	EPA 8015B	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	D-06
C29-C40 (MORO)	22	10	"	"	"	"	"	"	D-06
Surrogate: p-Terphenyl		94.9 %	65-135		"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	22D0252	04/19/22	04/26/22	EPA 6010b	
Silver	ND	2.0	"	"	"	"	04/26/22	"	
Arsenic	ND	5.0	"	"	"	"	04/26/22	"	
Barium	61	1.0	"	"	"	"	04/26/22	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	04/26/22	"	
Chromium	16	2.0	"	"	"	"	04/26/22	"	
Cobalt	4.1	2.0	"	"	"	"	04/26/22	"	
Copper	12	1.0	"	"	"	"	04/26/22	"	
Lead	4.1	3.0	"	"	"	"	04/26/22	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	7.1	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	5.0	"	"	"	"	"	"	
Vanadium	19	5.0	"	"	"	"	04/26/22	"	
Zinc	35	1.0	"	"	"	"	"	"	
Boron	ND	5.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	ND	0.10	mg/kg	1	22D0262	04/20/22	04/26/22	EPA 7471A Soil	
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SunStar Laboratories, Inc.

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-10-19-20.5
T221151-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	2.5	ug/kg	1	22D0308	04/19/22	04/23/22	EPA 8260B	
Bromochloromethane	ND	2.5	"	"	"	"	"	"	
Bromodichloromethane	ND	2.5	"	"	"	"	"	"	
Bromoform	ND	2.5	"	"	"	"	"	"	
Bromomethane	ND	2.5	"	"	"	"	"	"	
n-Butylbenzene	ND	2.5	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.5	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.5	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.5	"	"	"	"	"	"	
Chlorobenzene	ND	2.5	"	"	"	"	"	"	
Chloroethane	ND	2.5	"	"	"	"	"	"	
Chloroform	ND	2.5	"	"	"	"	"	"	
Chloromethane	ND	2.5	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.5	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.5	"	"	"	"	"	"	
Dibromochloromethane	ND	2.5	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.5	"	"	"	"	"	"	
Dibromomethane	ND	2.5	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.5	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	2.5	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.5	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.5	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.5	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.5	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.5	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.5	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.5	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.5	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.5	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-10-19-20.5
T221151-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

cis-1,3-Dichloropropene	ND	2.5	ug/kg	1	22D0308	04/19/22	04/23/22	EPA 8260B	
trans-1,3-Dichloropropene	ND	2.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.5	"	"	"	"	"	"	
Isopropylbenzene	ND	2.5	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.5	"	"	"	"	"	"	
Methylene chloride	ND	10	"	"	"	"	"	"	
Naphthalene	ND	2.5	"	"	"	"	"	"	
n-Propylbenzene	ND	2.5	"	"	"	"	"	"	
Styrene	ND	2.5	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.5	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.5	"	"	"	"	"	"	
Tetrachloroethene	ND	2.5	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.5	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.5	"	"	"	"	"	"	
Trichloroethene	ND	2.5	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.5	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.5	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.5	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.5	"	"	"	"	"	"	
Vinyl chloride	ND	2.5	"	"	"	"	"	"	
Benzene	ND	2.5	"	"	"	"	"	"	
Toluene	ND	2.5	"	"	"	"	"	"	
Ethylbenzene	ND	2.5	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	2.5	"	"	"	"	"	"	
Acetone	ND	5.0	"	"	"	"	"	"	
Methyl ethyl ketone	ND	5.0	"	"	"	"	"	"	
Methyl isobutyl ketone	ND	5.0	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	5.0	"	"	"	"	"	"	

Surrogate: 4-Bromofluorobenzene 107 % 75.4-139 " " " "

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-10-19-20.5
T221151-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Surrogate: Dibromofluoromethane	103 %	73.1-125	22D0308	04/19/22	04/23/22	EPA 8260B
Surrogate: Toluene-d8	93.9 %	82.6-117	"	"	"	"

SunStar Laboratories, Inc.

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-9-7-9

T221151-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015B

C6-C12 (GRO)	ND	10	mg/kg	1	22D0261	04/20/22	04/22/22	EPA 8015B	
C13-C28 (DRO)	17	10	"	"	"	"	"	"	D-09
C29-C40 (MORO)	170	10	"	"	"	"	"	"	D-06
Surrogate: <i>p</i> -Terphenyl		97.9 %	65-135		"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	22D0252	04/19/22	04/26/22	EPA 6010b	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	68	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	10	2.0	"	"	"	"	"	"	
Cobalt	5.0	2.0	"	"	"	"	"	"	
Copper	11	1.0	"	"	"	"	"	"	
Lead	4.7	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	7.8	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	5.0	"	"	"	"	"	"	
Vanadium	21	5.0	"	"	"	"	"	"	
Zinc	36	1.0	"	"	"	"	"	"	
Boron	ND	5.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	ND	0.10	mg/kg	1	22D0262	04/20/22	04/26/22	EPA 7471A Soil	
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SunStar Laboratories, Inc.

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Taili Iinuma, Project Manager



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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-9-7-9

T221151-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	2.5	ug/kg	1	22D0308	04/19/22	04/23/22	EPA 8260B
Bromochloromethane	ND	2.5	"	"	"	"	"	"
Bromodichloromethane	ND	2.5	"	"	"	"	"	"
Bromoform	ND	2.5	"	"	"	"	"	"
Bromomethane	ND	2.5	"	"	"	"	"	"
n-Butylbenzene	ND	2.5	"	"	"	"	"	"
sec-Butylbenzene	ND	2.5	"	"	"	"	"	"
tert-Butylbenzene	ND	2.5	"	"	"	"	"	"
Carbon tetrachloride	ND	2.5	"	"	"	"	"	"
Chlorobenzene	ND	2.5	"	"	"	"	"	"
Chloroethane	ND	2.5	"	"	"	"	"	"
Chloroform	ND	2.5	"	"	"	"	"	"
Chloromethane	ND	2.5	"	"	"	"	"	"
2-Chlorotoluene	ND	2.5	"	"	"	"	"	"
4-Chlorotoluene	ND	2.5	"	"	"	"	"	"
Dibromochloromethane	ND	2.5	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	2.5	"	"	"	"	"	"
Dibromomethane	ND	2.5	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
Dichlorodifluoromethane	ND	2.5	"	"	"	"	"	"
1,1-Dichloroethane	ND	2.5	"	"	"	"	"	"
1,2-Dichloroethane	ND	2.5	"	"	"	"	"	"
1,1-Dichloroethene	ND	2.5	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	2.5	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	2.5	"	"	"	"	"	"
1,2-Dichloropropane	ND	2.5	"	"	"	"	"	"
1,3-Dichloropropane	ND	2.5	"	"	"	"	"	"
2,2-Dichloropropane	ND	2.5	"	"	"	"	"	"
1,1-Dichloropropene	ND	2.5	"	"	"	"	"	"

SunStar Laboratories, Inc.

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-9-7-9

T221151-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

cis-1,3-Dichloropropene	ND	2.5	ug/kg	1	22D0308	04/19/22	04/23/22	EPA 8260B	
trans-1,3-Dichloropropene	ND	2.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.5	"	"	"	"	"	"	
Isopropylbenzene	ND	2.5	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.5	"	"	"	"	"	"	
Methylene chloride	ND	10	"	"	"	"	"	"	
Naphthalene	ND	2.5	"	"	"	"	"	"	
n-Propylbenzene	ND	2.5	"	"	"	"	"	"	
Styrene	ND	2.5	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.5	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.5	"	"	"	"	"	"	
Tetrachloroethene	ND	2.5	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.5	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.5	"	"	"	"	"	"	
Trichloroethene	ND	2.5	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.5	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.5	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.5	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.5	"	"	"	"	"	"	
Vinyl chloride	ND	2.5	"	"	"	"	"	"	
Benzene	ND	2.5	"	"	"	"	"	"	
Toluene	ND	2.5	"	"	"	"	"	"	
Ethylbenzene	ND	2.5	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	2.5	"	"	"	"	"	"	
Acetone	6.1	5.0	"	"	"	"	"	"	
Methyl ethyl ketone	ND	5.0	"	"	"	"	"	"	
Methyl isobutyl ketone	ND	5.0	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	5.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	75.4-139		"	"	"	"	

SunStar Laboratories, Inc.

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-9-7-9

T221151-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Surrogate: Dibromofluoromethane	102 %	73.1-125	22D0308	04/19/22	04/23/22	EPA 8260B
Surrogate: Toluene-d8	97.6 %	82.6-117	"	"	"	"

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-8-1.3-2.3
T221151-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015B

C6-C12 (GRO)	ND	10	mg/kg	1	22D0261	04/20/22	04/22/22	EPA 8015B	RE-03
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	D-06, RE-03
C29-C40 (MORO)	23	10	"	"	"	"	"	"	D-06, RE-03
Surrogate: <i>p</i> -Terphenyl		101 %	65-135		"	"	"	"	RE-03

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	22D0252	04/19/22	04/26/22	EPA 6010b	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	84	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	04/26/22	"	
Cadmium	ND	2.0	"	"	"	"	04/26/22	"	
Chromium	12	2.0	"	"	"	"	"	"	
Cobalt	6.0	2.0	"	"	"	"	"	"	
Copper	11	1.0	"	"	"	"	"	"	
Lead	4.1	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	8.7	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	5.0	"	"	"	"	"	"	
Vanadium	27	5.0	"	"	"	"	"	"	
Zinc	41	1.0	"	"	"	"	"	"	
Boron	ND	5.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	ND	0.10	mg/kg	1	22D0262	04/20/22	04/26/22	EPA 7471A Soil	
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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-8-1.3-2.3
T221151-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	2.5	ug/kg	1	22D0308	04/19/22	04/23/22	EPA 8260B	
Bromochloromethane	ND	2.5	"	"	"	"	"	"	
Bromodichloromethane	ND	2.5	"	"	"	"	"	"	
Bromoform	ND	2.5	"	"	"	"	"	"	
Bromomethane	ND	2.5	"	"	"	"	"	"	
n-Butylbenzene	ND	2.5	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.5	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.5	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.5	"	"	"	"	"	"	
Chlorobenzene	ND	2.5	"	"	"	"	"	"	
Chloroethane	ND	2.5	"	"	"	"	"	"	
Chloroform	ND	2.5	"	"	"	"	"	"	
Chloromethane	ND	2.5	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.5	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.5	"	"	"	"	"	"	
Dibromochloromethane	ND	2.5	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.5	"	"	"	"	"	"	
Dibromomethane	ND	2.5	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.5	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	2.5	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.5	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.5	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.5	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.5	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.5	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.5	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.5	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.5	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.5	"	"	"	"	"	"	

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-8-1.3-2.3
T221151-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

cis-1,3-Dichloropropene	ND	2.5	ug/kg	1	22D0308	04/19/22	04/23/22	EPA 8260B	
trans-1,3-Dichloropropene	ND	2.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.5	"	"	"	"	"	"	
Isopropylbenzene	ND	2.5	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.5	"	"	"	"	"	"	
Methylene chloride	ND	10	"	"	"	"	"	"	
Naphthalene	ND	2.5	"	"	"	"	"	"	
n-Propylbenzene	ND	2.5	"	"	"	"	"	"	
Styrene	ND	2.5	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.5	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.5	"	"	"	"	"	"	
Tetrachloroethene	ND	2.5	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.5	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.5	"	"	"	"	"	"	
Trichloroethene	ND	2.5	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.5	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.5	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.5	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.5	"	"	"	"	"	"	
Vinyl chloride	ND	2.5	"	"	"	"	"	"	
Benzene	ND	2.5	"	"	"	"	"	"	
Toluene	ND	2.5	"	"	"	"	"	"	
Ethylbenzene	ND	2.5	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	2.5	"	"	"	"	"	"	
Acetone	13	5.0	"	"	"	"	"	"	
Methyl ethyl ketone	ND	5.0	"	"	"	"	"	"	
Methyl isobutyl ketone	ND	5.0	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	5.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	75.4-139		"	"	"	"	

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

B-8-1.3-2.3
T221151-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Surrogate: Dibromofluoromethane	104 %	73.1-125	22D0308	04/19/22	04/23/22	EPA 8260B
Surrogate: Toluene-d8	90.6 %	82.6-117	"	"	"	"

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Drum # 1-B-8-B-9-B-10
T221151-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015B

C6-C12 (GRO)	ND	10	mg/kg	1	22D0261	04/20/22	04/22/22	EPA 8015B	
C13-C28 (DRO)	23	10	"	"	"	"	"	"	
C29-C40 (MORO)	310	10	"	"	"	"	"	"	D-06
Surrogate: <i>p</i> -Terphenyl		94.3 %	65-135		"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	22D0252	04/19/22	04/26/22	EPA 6010b	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	65	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	12	2.0	"	"	"	"	"	"	
Cobalt	4.9	2.0	"	"	"	"	"	"	
Copper	13	1.0	"	"	"	"	"	"	
Lead	5.3	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	8.1	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	5.0	"	"	"	"	"	"	
Vanadium	24	5.0	"	"	"	"	"	"	
Zinc	41	1.0	"	"	"	"	"	"	
Boron	ND	5.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	ND	0.10	mg/kg	1	22D0262	04/20/22	04/26/22	EPA 7471A Soil	
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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Drum # 1-B-8-B-9-B-10
T221151-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	2.5	ug/kg	1	22D0308	04/19/22	04/23/22	EPA 8260B
Bromochloromethane	ND	2.5	"	"	"	"	"	"
Bromodichloromethane	ND	2.5	"	"	"	"	"	"
Bromoform	ND	2.5	"	"	"	"	"	"
Bromomethane	ND	2.5	"	"	"	"	"	"
n-Butylbenzene	ND	2.5	"	"	"	"	"	"
sec-Butylbenzene	ND	2.5	"	"	"	"	"	"
tert-Butylbenzene	ND	2.5	"	"	"	"	"	"
Carbon tetrachloride	ND	2.5	"	"	"	"	"	"
Chlorobenzene	ND	2.5	"	"	"	"	"	"
Chloroethane	ND	2.5	"	"	"	"	"	"
Chloroform	ND	2.5	"	"	"	"	"	"
Chloromethane	ND	2.5	"	"	"	"	"	"
2-Chlorotoluene	ND	2.5	"	"	"	"	"	"
4-Chlorotoluene	ND	2.5	"	"	"	"	"	"
Dibromochloromethane	ND	2.5	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	2.5	"	"	"	"	"	"
Dibromomethane	ND	2.5	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
Dichlorodifluoromethane	ND	2.5	"	"	"	"	"	"
1,1-Dichloroethane	ND	2.5	"	"	"	"	"	"
1,2-Dichloroethane	ND	2.5	"	"	"	"	"	"
1,1-Dichloroethene	ND	2.5	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	2.5	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	2.5	"	"	"	"	"	"
1,2-Dichloropropane	ND	2.5	"	"	"	"	"	"
1,3-Dichloropropane	ND	2.5	"	"	"	"	"	"
2,2-Dichloropropane	ND	2.5	"	"	"	"	"	"
1,1-Dichloropropene	ND	2.5	"	"	"	"	"	"

SunStar Laboratories, Inc.

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Taili Iinuma, Project Manager



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Ninyo & Moore
475 Goddard, Ste. 200
Irvine CA, 92618

Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Drum # 1-B-8-B-9-B-10
T221151-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

cis-1,3-Dichloropropene	ND	2.5	ug/kg	1	22D0308	04/19/22	04/23/22	EPA 8260B	
trans-1,3-Dichloropropene	ND	2.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.5	"	"	"	"	"	"	
Isopropylbenzene	ND	2.5	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.5	"	"	"	"	"	"	
Methylene chloride	ND	10	"	"	"	"	"	"	
Naphthalene	ND	2.5	"	"	"	"	"	"	
n-Propylbenzene	ND	2.5	"	"	"	"	"	"	
Styrene	ND	2.5	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.5	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.5	"	"	"	"	"	"	
Tetrachloroethene	ND	2.5	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.5	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.5	"	"	"	"	"	"	
Trichloroethene	ND	2.5	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.5	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.5	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.5	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.5	"	"	"	"	"	"	
Vinyl chloride	ND	2.5	"	"	"	"	"	"	
Benzene	ND	2.5	"	"	"	"	"	"	
Toluene	ND	2.5	"	"	"	"	"	"	
Ethylbenzene	ND	2.5	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	2.5	"	"	"	"	"	"	
Acetone	10	5.0	"	"	"	"	"	"	
Methyl ethyl ketone	ND	5.0	"	"	"	"	"	"	
Methyl isobutyl ketone	ND	5.0	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	5.0	"	"	"	"	"	"	

Surrogate: 4-Bromofluorobenzene 98.8 % 75.4-139 " " " "

SunStar Laboratories, Inc.

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Drum # 1-B-8-B-9-B-10
T221151-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Surrogate: Dibromofluoromethane	101 %	73.1-125	22D0308	04/19/22	04/23/22	EPA 8260B
Surrogate: Toluene-d8	95.1 %	82.6-117	"	"	"	"

SunStar Laboratories, Inc.

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Drum # 2-B-8-B-9-B-10
T221151-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015B

C6-C12 (GRO)	ND	10	mg/kg	1	22D0261	04/20/22	04/22/22	EPA 8015B	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		94.2 %	65-135		"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	22D0252	04/19/22	04/26/22	EPA 6010b	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	96	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	04/26/22	"	
Cadmium	ND	2.0	"	"	"	"	04/26/22	"	
Chromium	10	2.0	"	"	"	"	"	"	
Cobalt	6.4	2.0	"	"	"	"	"	"	
Copper	14	1.0	"	"	"	"	"	"	
Lead	6.2	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	9.3	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	5.0	"	"	"	"	"	"	
Vanadium	26	5.0	"	"	"	"	"	"	
Zinc	47	1.0	"	"	"	"	"	"	
Boron	ND	5.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	ND	0.10	mg/kg	1	22D0262	04/20/22	04/26/22	EPA 7471A Soil	
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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Drum # 2-B-8-B-9-B-10
T221151-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	2.5	ug/kg	1	22D0308	04/19/22	04/23/22	EPA 8260B
Bromochloromethane	ND	2.5	"	"	"	"	"	"
Bromodichloromethane	ND	2.5	"	"	"	"	"	"
Bromoform	ND	2.5	"	"	"	"	"	"
Bromomethane	ND	2.5	"	"	"	"	"	"
n-Butylbenzene	ND	2.5	"	"	"	"	"	"
sec-Butylbenzene	ND	2.5	"	"	"	"	"	"
tert-Butylbenzene	ND	2.5	"	"	"	"	"	"
Carbon tetrachloride	ND	2.5	"	"	"	"	"	"
Chlorobenzene	ND	2.5	"	"	"	"	"	"
Chloroethane	ND	2.5	"	"	"	"	"	"
Chloroform	ND	2.5	"	"	"	"	"	"
Chloromethane	ND	2.5	"	"	"	"	"	"
2-Chlorotoluene	ND	2.5	"	"	"	"	"	"
4-Chlorotoluene	ND	2.5	"	"	"	"	"	"
Dibromochloromethane	ND	2.5	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	2.5	"	"	"	"	"	"
Dibromomethane	ND	2.5	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
Dichlorodifluoromethane	ND	2.5	"	"	"	"	"	"
1,1-Dichloroethane	ND	2.5	"	"	"	"	"	"
1,2-Dichloroethane	ND	2.5	"	"	"	"	"	"
1,1-Dichloroethene	ND	2.5	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	2.5	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	2.5	"	"	"	"	"	"
1,2-Dichloropropane	ND	2.5	"	"	"	"	"	"
1,3-Dichloropropane	ND	2.5	"	"	"	"	"	"
2,2-Dichloropropane	ND	2.5	"	"	"	"	"	"
1,1-Dichloropropene	ND	2.5	"	"	"	"	"	"

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Drum # 2-B-8-B-9-B-10
T221151-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

cis-1,3-Dichloropropene	ND	2.5	ug/kg	1	22D0308	04/19/22	04/23/22	EPA 8260B
trans-1,3-Dichloropropene	ND	2.5	"	"	"	"	"	"
Hexachlorobutadiene	ND	2.5	"	"	"	"	"	"
Isopropylbenzene	ND	2.5	"	"	"	"	"	"
p-Isopropyltoluene	ND	2.5	"	"	"	"	"	"
Methylene chloride	ND	10	"	"	"	"	"	"
Naphthalene	ND	2.5	"	"	"	"	"	"
n-Propylbenzene	ND	2.5	"	"	"	"	"	"
Styrene	ND	2.5	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	2.5	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	2.5	"	"	"	"	"	"
Tetrachloroethene	ND	2.5	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	2.5	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	2.5	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	2.5	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	2.5	"	"	"	"	"	"
Trichloroethene	ND	2.5	"	"	"	"	"	"
Trichlorofluoromethane	ND	2.5	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	2.5	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	2.5	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	2.5	"	"	"	"	"	"
Vinyl chloride	ND	2.5	"	"	"	"	"	"
Benzene	ND	2.5	"	"	"	"	"	"
Toluene	ND	2.5	"	"	"	"	"	"
Ethylbenzene	ND	2.5	"	"	"	"	"	"
m,p-Xylene	ND	5.0	"	"	"	"	"	"
o-Xylene	ND	2.5	"	"	"	"	"	"
Acetone	ND	5.0	"	"	"	"	"	"
Methyl ethyl ketone	ND	5.0	"	"	"	"	"	"
Methyl isobutyl ketone	ND	5.0	"	"	"	"	"	"
2-Hexanone (MBK)	ND	5.0	"	"	"	"	"	"

Surrogate: 4-Bromofluorobenzene

106 %

75.4-139

"

"

"

"

SunStar Laboratories, Inc.

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Taili Iinuma, Project Manager



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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Drum # 2-B-8-B-9-B-10
T221151-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Surrogate: Dibromofluoromethane	102 %	73.1-125	22D0308	04/19/22	04/23/22	EPA 8260B
Surrogate: Toluene-d8	89.0 %	82.6-117	"	"	"	"

SunStar Laboratories, Inc.

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Taili Iinuma, Project Manager



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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Composite 7:1 Drum # 3-B-8-B-9-B-10 - Drum # 9-B-1
T221151-22 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015B

C6-C12 (GRO)	ND	10	mg/kg	1	22D0261	04/20/22	04/22/22	EPA 8015B
C13-C28 (DRO)	ND	10	"	"	"	"	"	"
C29-C40 (MORO)	ND	10	"	"	"	"	"	"

Surrogate: *p*-Terphenyl 95.8 % 65-135 " " " "

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	22D0252	04/19/22	04/26/22	EPA 6010b
Silver	ND	2.0	"	"	"	"	04/26/22	"
Arsenic	ND	5.0	"	"	"	"	04/26/22	"
Barium	63	1.0	"	"	"	"	04/26/22	"
Beryllium	ND	1.0	"	"	"	"	"	"
Cadmium	ND	2.0	"	"	"	"	04/26/22	"
Chromium	11	2.0	"	"	"	"	04/26/22	"
Cobalt	5.2	2.0	"	"	"	"	04/26/22	"
Copper	11	1.0	"	"	"	"	04/26/22	"
Lead	4.9	3.0	"	"	"	"	04/26/22	"
Molybdenum	ND	5.0	"	"	"	"	"	"
Nickel	8.3	2.0	"	"	"	"	"	"
Selenium	ND	5.0	"	"	"	"	"	"
Thallium	ND	5.0	"	"	"	"	"	"
Vanadium	21	5.0	"	"	"	"	04/26/22	"
Zinc	39	1.0	"	"	"	"	"	"
Boron	ND	5.0	"	"	"	"	"	"

Cold Vapor Extraction EPA 7470/7471

Mercury	ND	0.10	mg/kg	1	22D0262	04/20/22	04/26/22	EPA 7471A Soil
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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Composite 7:1 Drum # 3-B-8-B-9-B-10 - Drum # 9-B-1
T221151-22 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	2.5	ug/kg	1	22D0308	04/19/22	04/23/22	EPA 8260B
Bromochloromethane	ND	2.5	"	"	"	"	"	"
Bromodichloromethane	ND	2.5	"	"	"	"	"	"
Bromoform	ND	2.5	"	"	"	"	"	"
Bromomethane	ND	2.5	"	"	"	"	"	"
n-Butylbenzene	ND	2.5	"	"	"	"	"	"
sec-Butylbenzene	ND	2.5	"	"	"	"	"	"
tert-Butylbenzene	ND	2.5	"	"	"	"	"	"
Carbon tetrachloride	ND	2.5	"	"	"	"	"	"
Chlorobenzene	ND	2.5	"	"	"	"	"	"
Chloroethane	ND	2.5	"	"	"	"	"	"
Chloroform	ND	2.5	"	"	"	"	"	"
Chloromethane	ND	2.5	"	"	"	"	"	"
2-Chlorotoluene	ND	2.5	"	"	"	"	"	"
4-Chlorotoluene	ND	2.5	"	"	"	"	"	"
Dibromochloromethane	ND	2.5	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	2.5	"	"	"	"	"	"
Dibromomethane	ND	2.5	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
Dichlorodifluoromethane	ND	2.5	"	"	"	"	"	"
1,1-Dichloroethane	ND	2.5	"	"	"	"	"	"
1,2-Dichloroethane	ND	2.5	"	"	"	"	"	"
1,1-Dichloroethene	ND	2.5	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	2.5	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	2.5	"	"	"	"	"	"
1,2-Dichloropropane	ND	2.5	"	"	"	"	"	"
1,3-Dichloropropane	ND	2.5	"	"	"	"	"	"
2,2-Dichloropropane	ND	2.5	"	"	"	"	"	"
1,1-Dichloropropene	ND	2.5	"	"	"	"	"	"

SunStar Laboratories, Inc.

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Taili Iinuma, Project Manager



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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Composite 7:1 Drum # 3-B-8-B-9-B-10 - Drum # 9-B-1
T221151-22 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

cis-1,3-Dichloropropene	ND	2.5	ug/kg	1	22D0308	04/19/22	04/23/22	EPA 8260B	
trans-1,3-Dichloropropene	ND	2.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.5	"	"	"	"	"	"	
Isopropylbenzene	ND	2.5	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.5	"	"	"	"	"	"	
Methylene chloride	ND	10	"	"	"	"	"	"	
Naphthalene	ND	2.5	"	"	"	"	"	"	
n-Propylbenzene	ND	2.5	"	"	"	"	"	"	
Styrene	ND	2.5	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.5	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.5	"	"	"	"	"	"	
Tetrachloroethene	ND	2.5	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.5	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.5	"	"	"	"	"	"	
Trichloroethene	ND	2.5	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.5	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.5	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.5	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.5	"	"	"	"	"	"	
Vinyl chloride	ND	2.5	"	"	"	"	"	"	
Benzene	ND	2.5	"	"	"	"	"	"	
Toluene	ND	2.5	"	"	"	"	"	"	
Ethylbenzene	ND	2.5	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	2.5	"	"	"	"	"	"	
Acetone	12	5.0	"	"	"	"	"	"	
Methyl ethyl ketone	ND	5.0	"	"	"	"	"	"	
Methyl isobutyl ketone	ND	5.0	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	5.0	"	"	"	"	"	"	

Surrogate: 4-Bromofluorobenzene 107 % 75.4-139 " " " "

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Irvine CA, 92618

Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Composite 7:1 Drum # 3-B-8-B-9-B-10 - Drum # 9-B-1
T221151-22 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Surrogate: Dibromofluoromethane	101 %	73.1-125	22D0308	04/19/22	04/23/22	EPA 8260B
Surrogate: Toluene-d8	99.0 %	82.6-117	"	"	"	"

SunStar Laboratories, Inc.

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Composite 7:1 Drum # 10-B-14 - Drum # 16-B-20
T221151-23 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015B

C6-C12 (GRO)	ND	10	mg/kg	1	22D0261	04/20/22	04/22/22	EPA 8015B	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		95.5 %	65-135		"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	22D0252	04/19/22	04/26/22	EPA 6010b	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	63	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	8.6	2.0	"	"	"	"	"	"	
Cobalt	3.5	2.0	"	"	"	"	"	"	
Copper	8.1	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	6.8	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	5.0	"	"	"	"	"	"	
Vanadium	17	5.0	"	"	"	"	"	"	
Zinc	23	1.0	"	"	"	"	"	"	
Boron	ND	5.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	ND	0.10	mg/kg	1	22D0262	04/20/22	04/26/22	EPA 7471A Soil	
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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Composite 7:1 Drum # 10-B-14 - Drum # 16-B-20
T221151-23 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	2.5	ug/kg	1	22D0308	04/19/22	04/23/22	EPA 8260B
Bromochloromethane	ND	2.5	"	"	"	"	"	"
Bromodichloromethane	ND	2.5	"	"	"	"	"	"
Bromoform	ND	2.5	"	"	"	"	"	"
Bromomethane	ND	2.5	"	"	"	"	"	"
n-Butylbenzene	ND	2.5	"	"	"	"	"	"
sec-Butylbenzene	ND	2.5	"	"	"	"	"	"
tert-Butylbenzene	ND	2.5	"	"	"	"	"	"
Carbon tetrachloride	ND	2.5	"	"	"	"	"	"
Chlorobenzene	ND	2.5	"	"	"	"	"	"
Chloroethane	ND	2.5	"	"	"	"	"	"
Chloroform	ND	2.5	"	"	"	"	"	"
Chloromethane	ND	2.5	"	"	"	"	"	"
2-Chlorotoluene	ND	2.5	"	"	"	"	"	"
4-Chlorotoluene	ND	2.5	"	"	"	"	"	"
Dibromochloromethane	ND	2.5	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	2.5	"	"	"	"	"	"
Dibromomethane	ND	2.5	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	2.5	"	"	"	"	"	"
Dichlorodifluoromethane	ND	2.5	"	"	"	"	"	"
1,1-Dichloroethane	ND	2.5	"	"	"	"	"	"
1,2-Dichloroethane	ND	2.5	"	"	"	"	"	"
1,1-Dichloroethene	ND	2.5	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	2.5	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	2.5	"	"	"	"	"	"
1,2-Dichloropropane	ND	2.5	"	"	"	"	"	"
1,3-Dichloropropane	ND	2.5	"	"	"	"	"	"
2,2-Dichloropropane	ND	2.5	"	"	"	"	"	"
1,1-Dichloropropene	ND	2.5	"	"	"	"	"	"

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Composite 7:1 Drum # 10-B-14 - Drum # 16-B-20
T221151-23 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

cis-1,3-Dichloropropene	ND	2.5	ug/kg	1	22D0308	04/19/22	04/23/22	EPA 8260B	
trans-1,3-Dichloropropene	ND	2.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.5	"	"	"	"	"	"	
Isopropylbenzene	ND	2.5	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.5	"	"	"	"	"	"	
Methylene chloride	ND	10	"	"	"	"	"	"	
Naphthalene	ND	2.5	"	"	"	"	"	"	
n-Propylbenzene	ND	2.5	"	"	"	"	"	"	
Styrene	ND	2.5	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.5	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.5	"	"	"	"	"	"	
Tetrachloroethene	ND	2.5	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.5	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.5	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.5	"	"	"	"	"	"	
Trichloroethene	ND	2.5	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.5	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.5	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.5	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.5	"	"	"	"	"	"	
Vinyl chloride	ND	2.5	"	"	"	"	"	"	
Benzene	ND	2.5	"	"	"	"	"	"	
Toluene	ND	2.5	"	"	"	"	"	"	
Ethylbenzene	ND	2.5	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	2.5	"	"	"	"	"	"	
Acetone	ND	5.0	"	"	"	"	"	"	
Methyl ethyl ketone	ND	5.0	"	"	"	"	"	"	
Methyl isobutyl ketone	ND	5.0	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	5.0	"	"	"	"	"	"	

Surrogate: 4-Bromofluorobenzene	108 %	75.4-139	"	"	"	"
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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Composite 7:1 Drum # 10-B-14 - Drum # 16-B-20
T221151-23 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Surrogate: Dibromofluoromethane	107 %	73.1-125	22D0308	04/19/22	04/23/22	EPA 8260B
Surrogate: Toluene-d8	90.1 %	82.6-117	"	"	"	"

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Extractable Petroleum Hydrocarbons by 8015B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 22D0261 - EPA 3550B GC

Blank (22D0261-BLK1)

Prepared: 04/20/22 Analyzed: 04/21/22

C6-C12 (GRO)	ND	10	mg/kg							
C13-C28 (DRO)	ND	10	"							
C29-C40 (MORO)	ND	10	"							
Surrogate: <i>p</i> -Terphenyl	96.5		"	100		96.5	65-135			

LCS (22D0261-BS1)

Prepared: 04/20/22 Analyzed: 04/21/22

C13-C28 (DRO)	450	10	mg/kg	500		89.5	75-125			
Surrogate: <i>p</i> -Terphenyl	89.3		"	100		89.3	65-135			

LCS Dup (22D0261-BSD1)

Prepared: 04/20/22 Analyzed: 04/21/22

C13-C28 (DRO)	470	10	mg/kg	500		94.3	75-125	5.21	20	
Surrogate: <i>p</i> -Terphenyl	93.8		"	100		93.8	65-135			

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Metals by EPA 6010B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 22D0252 - EPA 3050B

Blank (22D0252-BLK1)

Prepared: 04/19/22 Analyzed: 04/26/22

Antimony	ND	3.0	mg/kg
Silver	ND	2.0	"
Arsenic	ND	5.0	"
Barium	ND	1.0	"
Beryllium	ND	1.0	"
Cadmium	ND	2.0	"
Chromium	ND	2.0	"
Cobalt	ND	2.0	"
Copper	ND	1.0	"
Lead	ND	3.0	"
Molybdenum	ND	5.0	"
Nickel	ND	2.0	"
Selenium	ND	5.0	"
Thallium	ND	5.0	"
Vanadium	ND	5.0	"
Zinc	ND	1.0	"
Boron	ND	5.0	"

LCS (22D0252-BS1)

Prepared: 04/19/22 Analyzed: 04/26/22

Arsenic	99.5	5.0	mg/kg	100	99.5	75-125
Barium	102	1.0	"	100	102	75-125
Cadmium	102	2.0	"	100	102	75-125
Chromium	101	2.0	"	100	101	75-125
Lead	99.7	3.0	"	100	99.7	75-125

Matrix Spike (22D0252-MS1)

Source: T221139-01

Prepared: 04/19/22 Analyzed: 04/26/22

Arsenic	88.2	5.0	mg/kg	100	1.05	87.1	75-125	
Barium	177	1.0	"	100	119	58.3	75-125	QM-05
Cadmium	85.6	2.0	"	100	0.317	85.3	75-125	
Chromium	98.4	2.0	"	100	12.0	86.5	75-125	
Lead	130	3.0	"	100	69.8	60.7	75-125	QM-05

SunStar Laboratories, Inc.

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Metals by EPA 6010B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 22D0252 - EPA 3050B

Matrix Spike Dup (22D0252-MSD1)

Source: T221139-01

Prepared: 04/19/22 Analyzed: 04/26/22

Arsenic	84.7	5.0	mg/kg	100	1.05	83.7	75-125	3.97	20	
Barium	168	1.0	"	100	119	48.9	75-125	5.46	20	QM-05
Cadmium	83.2	2.0	"	100	0.317	82.9	75-125	2.88	20	
Chromium	90.4	2.0	"	100	12.0	78.5	75-125	8.48	20	
Lead	126	3.0	"	100	69.8	56.5	75-125	3.28	20	QM-05

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Cold Vapor Extraction EPA 7470/7471 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 22D0262 - EPA 7471A Soil

Blank (22D0262-BLK1)

Prepared: 04/20/22 Analyzed: 04/26/22

Mercury	ND	0.10	mg/kg							
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LCS (22D0262-BS1)

Prepared: 04/20/22 Analyzed: 04/26/22

Mercury	0.362	0.10	mg/kg	0.385		94.0	80-120			
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Matrix Spike (22D0262-MS1)

Source: T221145-01

Prepared: 04/20/22 Analyzed: 04/26/22

Mercury	0.416	0.10	mg/kg	0.417	ND	99.9	75-125			
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Matrix Spike Dup (22D0262-MSD1)

Source: T221145-01

Prepared: 04/20/22 Analyzed: 04/26/22

Mercury	0.400	0.10	mg/kg	0.397	ND	101	75-125	3.97	20	
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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 22D0308 - EPA 5030 GCMS

Blank (22D0308-BLK1)

Prepared: 04/22/22 Analyzed: 04/23/22

Bromobenzene	ND	2.5	ug/kg
Bromochloromethane	ND	2.5	"
Bromodichloromethane	ND	2.5	"
Bromoform	ND	2.5	"
Bromomethane	ND	2.5	"
n-Butylbenzene	ND	2.5	"
sec-Butylbenzene	ND	2.5	"
tert-Butylbenzene	ND	2.5	"
Carbon tetrachloride	ND	2.5	"
Chlorobenzene	ND	2.5	"
Chloroethane	ND	2.5	"
Chloroform	ND	2.5	"
Chloromethane	ND	2.5	"
2-Chlorotoluene	ND	2.5	"
4-Chlorotoluene	ND	2.5	"
Dibromochloromethane	ND	2.5	"
1,2-Dibromo-3-chloropropane	ND	5.0	"
1,2-Dibromoethane (EDB)	ND	2.5	"
Dibromomethane	ND	2.5	"
1,2-Dichlorobenzene	ND	2.5	"
1,3-Dichlorobenzene	ND	2.5	"
1,4-Dichlorobenzene	ND	2.5	"
Dichlorodifluoromethane	ND	2.5	"
1,1-Dichloroethane	ND	2.5	"
1,2-Dichloroethane	ND	2.5	"
1,1-Dichloroethene	ND	2.5	"
cis-1,2-Dichloroethene	ND	2.5	"
trans-1,2-Dichloroethene	ND	2.5	"
1,2-Dichloropropane	ND	2.5	"
1,3-Dichloropropane	ND	2.5	"
2,2-Dichloropropane	ND	2.5	"
1,1-Dichloropropene	ND	2.5	"
cis-1,3-Dichloropropene	ND	2.5	"
trans-1,3-Dichloropropene	ND	2.5	"
Hexachlorobutadiene	ND	2.5	"
Isopropylbenzene	ND	2.5	"

SunStar Laboratories, Inc.

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Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 22D0308 - EPA 5030 GCMS

Blank (22D0308-BLK1)

Prepared: 04/22/22 Analyzed: 04/23/22

p-Isopropyltoluene	ND	2.5	ug/kg							
Methylene chloride	ND	10	"							
Naphthalene	ND	2.5	"							
n-Propylbenzene	ND	2.5	"							
Styrene	ND	2.5	"							
1,1,2,2-Tetrachloroethane	ND	2.5	"							
1,1,1,2-Tetrachloroethane	ND	2.5	"							
Tetrachloroethene	ND	2.5	"							
1,2,3-Trichlorobenzene	ND	2.5	"							
1,2,4-Trichlorobenzene	ND	2.5	"							
1,1,2-Trichloroethane	ND	2.5	"							
1,1,1-Trichloroethane	ND	2.5	"							
Trichloroethene	ND	2.5	"							
Trichlorofluoromethane	ND	2.5	"							
1,2,3-Trichloropropane	ND	2.5	"							
1,3,5-Trimethylbenzene	ND	2.5	"							
1,2,4-Trimethylbenzene	ND	2.5	"							
Vinyl chloride	ND	2.5	"							
Benzene	ND	2.5	"							
Toluene	ND	2.5	"							
Ethylbenzene	ND	2.5	"							
m,p-Xylene	ND	5.0	"							
o-Xylene	ND	2.5	"							
Acetone	ND	5.0	"							
Methyl ethyl ketone	ND	5.0	"							
Methyl isobutyl ketone	ND	5.0	"							
2-Hexanone (MBK)	ND	5.0	"							
Surrogate: 4-Bromofluorobenzene	53.6		"	50.0		107	75.4-139			
Surrogate: Dibromofluoromethane	51.8		"	50.0		104	73.1-125			
Surrogate: Toluene-d8	50.3		"	50.0		101	82.6-117			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Taili Iinuma, Project Manager



25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Ninyo & Moore
475 Goddard, Ste. 200
Irvine CA, 92618

Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 22D0308 - EPA 5030 GCMS

LCS (22D0308-BS1)

Prepared: 04/22/22 Analyzed: 04/23/22

Chlorobenzene	48.8	2.5	ug/kg	50.0		97.6	65.2-124			
1,1-Dichloroethene	51.7	2.5	"	50.0		103	60.9-131			
Trichloroethene	50.2	2.5	"	50.0		100	62.1-126			
Benzene	44.9	2.5	"	50.0		89.8	65.3-127			
Toluene	49.2	2.5	"	50.0		98.3	64.3-122			
Surrogate: 4-Bromofluorobenzene	49.9		"	50.0		99.9	75.4-139			
Surrogate: Dibromofluoromethane	49.2		"	50.0		98.3	73.1-125			
Surrogate: Toluene-d8	50.6		"	50.0		101	82.6-117			

Matrix Spike (22D0308-MS1)

Source: T221168-01

Prepared: 04/22/22 Analyzed: 04/23/22

Chlorobenzene	38.8	2.5	ug/kg	50.0	ND	77.7	65.2-125			
1,1-Dichloroethene	47.7	2.5	"	50.0	ND	95.5	60.9-131			
Trichloroethene	41.5	2.5	"	50.0	ND	83.0	62.1-126			
Benzene	39.4	2.5	"	50.0	ND	78.8	65.3-127			
Toluene	36.5	2.5	"	50.0	ND	72.9	64.3-125			
Surrogate: 4-Bromofluorobenzene	52.3		"	50.0		105	75.4-139			
Surrogate: Dibromofluoromethane	47.6		"	50.0		95.2	73.1-125			
Surrogate: Toluene-d8	46.1		"	50.0		92.1	82.6-117			

Matrix Spike Dup (22D0308-MSD1)

Source: T221168-01

Prepared: 04/22/22 Analyzed: 04/23/22

Chlorobenzene	33.9	2.5	ug/kg	50.0	ND	67.8	65.2-125	13.7	20	
1,1-Dichloroethene	40.4	2.5	"	50.0	ND	80.8	60.9-131	16.6	20	
Trichloroethene	37.7	2.5	"	50.0	ND	75.5	62.1-126	9.54	20	
Benzene	33.6	2.5	"	50.0	ND	67.1	65.3-127	16.0	20	
Toluene	34.0	2.5	"	50.0	ND	68.0	64.3-125	7.04	20	
Surrogate: 4-Bromofluorobenzene	47.9		"	50.0		95.8	75.4-139			
Surrogate: Dibromofluoromethane	51.7		"	50.0		103	73.1-125			
Surrogate: Toluene-d8	50.7		"	50.0		101	82.6-117			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Taili Inuma, Project Manager



25712 Commercentre Drive
Lake Forest, California 92630
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Ninyo & Moore
475 Goddard, Ste. 200
Irvine CA, 92618

Project: OCSAN / Taft Sewer Project
Project Number: 211663001
Project Manager: Jennifer Schmidt

Reported:
04/27/22 15:32

Notes and Definitions

RE-03 Sample was rerun for carry over

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to possible matrix interference. The LCS was within acceptance criteria. The data is acceptable as no negative impact on data is expected.

D-09 Results in the diesel organics range are primarily due to overlap from a heavy oil range product.

D-06 The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Taili Iinuma, Project Manager

Chain of Custody Record

SunStar Laboratories, Inc.
25712 Commerce Centre Dr
Lake Forest, CA 92630
949-297-5020

Client: NINYO & MOORE
Address: 475 GODDARD, SUITE 200
Phone: 949-753-7070 Fax: _____
Project Manager: JENNIFER SCHMIDT

Date: 4/12/2022 Page: 1 of 2
Project Name: OCSAN / TAFT SANDER PROJECT
Collector: WICKY MACHINDANT Client Project #: 211643001
Batch #: 7221151 EDF #: _____

Sample ID	Date Sampled	Time	Sample Type	Container Type	8260 (VOCs)	8260 + OXY	8260 BTEX, OXY only	8270	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain	6010/7000 Title 22 Metals	Laboratory ID #	Comments/Preservative	Total # of containers	Notes
B-10-0-3.5	4/7/22	11:38	SOIL	JAR	X							X	X	12			
B-10-5-6.5	4/7/22	11:45	SOIL	JAR	X							X	X	12			
B-10-19-20.5	4/7/22	1:10	SOIL	JAR	X							X	X	3			
B-9-7-9	4/8/22	10:34	SOIL	JAR	X							X	X	3			
B-8-1.3-2.3	4/8/22	12:30	SOIL	JAR	X							X	X	3			
DRUM #1 B-8-B-9-B-10	4/8/22	12:50	SOIL	JAR	X							X	X	3			
DRUM #2 B-8-B-9-B-10	4/8/22	2:00	SOIL	JAR	X							X	X	3			
Relinquished by: (signature) <u>VAM</u> Date / Time <u>4/8/22</u> Received by: (signature) <u>Jessie Smith</u> Date / Time <u>4-8-22</u>																	
Relinquished by: (signature) <u>Quint Smith</u> Date / Time <u>4/20/22</u> Received by: (signature) <u>Alison Pitt</u> Date / Time <u>4/20/22</u>																	
Relinquished by: (signature) <u>Alison Pitt</u> Date / Time <u>4/20/22 10:26</u> Received by: (signature) <u>Alison Pitt</u> Date / Time <u>4-20-22 10:26</u>																	
Sample disposal/instructions: Disposal @ \$2.00 each Return to client _____ Pickup _____																	
Turn around time: <u>STD</u>																	

SunStar Laboratories, Inc.

Chain of Custody Record

25712 Commerce Centre Dr
Lake Forest, CA 92630
949-297-5020

Client: NIND & Moore
Address: 475 GORDARD, SUITE 200
Phone: 949-753-7070 Fax: _____
Project Manager: JENNIFER SCHMIDT

Date: 4/12/22 Page: 2 of 2
Project Name: OCEAN / TAFT SEWER PROJECT
Collector: AUSON PERZLOS Client Project #: 211663001
Batch #: 7291151 EDF #: _____

Sample ID	Date Sampled	Time	Sample Type	Container Type	8260	8260 + OXY	8260 BTEX, OXY only	8270	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain	8010/7000 Title 22 Metals	Laboratory ID #	Comments/Preservative	Total # of containers
DEUM#3-B-8-B-9-B-10	4/12/22	10:30	Soil	8021 JAR	X							X	X	8	COMPOSITE	14
DEUM#4-B-11	4/12/22	12:55	Soil	8021 JAR	X							X	X	9		
DEUM#5-B-7	4/13/22	9:55	Soil	8021 JAR	X							X	X	10		
DEUM#6-B-5-B-8	4/13/22	12:25	Soil	8021 JAR	X							X	X	11		
DEUM#7-B-4	4/13/22	2:00	Soil	8021 JAR	X							X	X	12		
DEUM#8-B-3-B-2	4/14/22	12:38	Soil	8021 JAR	X							X	X	13		
DEUM#9-B-1	4/14/22	2:13	Soil	8021 JAR	X							X	X	14		
DEUM#10-B-14	4/15/22	11:20	Soil	8021 JAR	X							X	X	15		
DEUM#11-B-15	4/15/22	1:40	Soil	8021 JAR	X							X	X	16		
DEUM#12-B-16	4/15/22	10:10	Soil	8021 JAR	X							X	X	17		
DEUM#13-B-17	4/15/22	12:12	Soil	8021 JAR	X							X	X	18		
DEUM#14-B-18	4/18/22	1:55	Soil	8021 JAR	X							X	X	19		
DEUM#15-B-19	4/19/22	10:45	Soil	8021 JAR	X							X	X	20		
DEUM#16-B-20	4/19/22	1:10	Soil	4021 JAR	X							X	X	21		
Relinquished by: (signature) <u>Alison Perzlos</u> Date / Time <u>4/20/22 10:26</u> Received by: (signature) <u>[Signature]</u> Date / Time <u>4-20-22 10:26</u>																
Relinquished by: (signature) _____ Date / Time _____ Received by: (signature) _____ Date / Time _____																
Relinquished by: (signature) _____ Date / Time _____ Received by: (signature) _____ Date / Time _____																

Turn around time: STD

Chain of Custody seals Y/N/A Y
Seals intact? Y/N/A Y
Received good condition/cold 1.22

Notes

Sample disposal instructions: Disposal @ \$2.00 each X

Return to client _____ Pickup _____

SAMPLE RECEIVING REVIEW SHEET

Batch/Work Order #:

1221151

Client Name:

Ninyo & Moore

Project:

OCSAN/Taft Sewer Project

Delivered by:

☒ Client

☐ SunStar Courier

☐ GLS

☐ FedEx

☐ UPS

If Courier, Received by:

Date/Time Courier

Received:

Lab Received by:

Travis

Date/Time Lab

Received:

4-20-22

1026

Total number of coolers received:

1

Thermometer ID: SC-1

Calibration due: 8/24/22

Temperature: Cooler #1 1.1 °C +/- the CF (+0.1 °C) = 1.2 °C corrected temperature

Temperature: Cooler #2 °C +/- the CF (+0.1 °C) = °C corrected temperature

Temperature: Cooler #3 °C +/- the CF (+0.1 °C) = °C corrected temperature

Temperature criteria = $\leq 6^{\circ}\text{C}$
(no frozen containers)

Within criteria?

☒ Yes ☐ No ☐ N/A

If NO:

Samples received on ice?

☐ Yes

☐ No →

Complete Non-Conformance Sheet

If on ice, samples received same day collected?

☐ Yes → Acceptable

☐ No →

Complete Non-Conformance Sheet

Custody seals intact on cooler/sample

☐ Yes

☐ No*

☒ N/A

Sample containers intact

☒ Yes

☐ No*

Sample labels match Chain of Custody IDs

☒ Yes

☐ No*

Total number of containers received match COC

☒ Yes

☐ No*

Proper containers received for analyses requested on COC

☒ Yes

☐ No*

Proper preservative indicated on COC/containers for analyses requested

☒ Yes

☐ No*

☐ N/A

Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times

☒ Yes

☐ No*

* Complete Non-Conformance Receiving Sheet if checked

Cooler/Sample Review - Initials and date:

DS 4-20-22

Comments:

WORK ORDER

T221151

Client: Ninyo & Moore

Project Manager: Taili Iinuma

Project: OCSAN / Taft Sewer Project

Project Number: 211663001

Report To:

Ninyo & Moore
Jennifer Schmidt
475 Goddard, Ste. 200
Irvine, CA 92618

Date Due: 04/27/22 17:00 (5 day TAT)

Received By: Travis Berner

Date Received: 04/20/22 10:26

Logged In By: Jennifer Berger

Date Logged In: 04/20/22 10:56

Samples Received at: 1.2°C

Custody Seals No Received On Ice Yes

Containers Intact Yes

COC/Labels Agree Yes

Preservation Confir No

Analysis	Due	TAT	Expires	Comments
----------	-----	-----	---------	----------

T221151-01 B-10-0-3.5 [Soil] Sampled 04/07/22 11:38 (GMT-08:00) Pacific Time (US &

6010 Title 22	04/27/22 15:00	5	10/04/22 11:38
8015 Carbon Chain	04/27/22 15:00	5	04/21/22 11:38
8260	04/27/22 15:00	5	04/21/22 11:38

T221151-02 B-10-5-6.5 [Soil] Sampled 04/07/22 11:45 (GMT-08:00) Pacific Time (US &

6010 Title 22	04/27/22 15:00	5	10/04/22 11:45
8015 Carbon Chain	04/27/22 15:00	5	04/21/22 11:45
8260	04/27/22 15:00	5	04/21/22 11:45

T221151-03 B-10-19-20.5 [Soil] Sampled 04/07/22 13:10 (GMT-08:00) Pacific Time (US &

6010 Title 22	04/27/22 15:00	5	10/04/22 13:10
8015 Carbon Chain	04/27/22 15:00	5	04/21/22 13:10
8260	04/27/22 15:00	5	04/21/22 13:10

T221151-04 B-9-7-9 [Soil] Sampled 04/08/22 10:34 (GMT-08:00) Pacific Time (US &

6010 Title 22	04/27/22 15:00	5	10/05/22 10:34
8015 Carbon Chain	04/27/22 15:00	5	04/22/22 10:34
8260	04/27/22 15:00	5	04/22/22 10:34

WORK ORDER

T221151

Client: Ninyo & Moore	Project Manager: Taili Iinuma
Project: OCSAN / Taft Sewer Project	Project Number: 211663001

Analysis	Due	TAT	Expires	Comments
T221151-05 B-8-1.3-2.3 [Soil] Sampled 04/08/22 12:30 (GMT-08:00) Pacific Time (US &				
6010 Title 22	04/27/22 15:00	5	10/05/22 12:30	
8015 Carbon Chain	04/27/22 15:00	5	04/22/22 12:30	
8260	04/27/22 15:00	5	04/22/22 12:30	
T221151-06 Drum # 1-B-8-B-9-B-10 [Soil] Sampled 04/08/22 12:56 (GMT-08:00) Pacific Time (US &				
6010 Title 22	04/27/22 15:00	5	10/05/22 12:56	
8015 Carbon Chain	04/27/22 15:00	5	04/22/22 12:56	
8260	04/27/22 15:00	5	04/22/22 12:56	
T221151-07 Drum # 2-B-8-B-9-B-10 [Soil] Sampled 04/08/22 14:00 (GMT-08:00) Pacific Time (US &				
6010 Title 22	04/27/22 15:00	5	10/05/22 14:00	
8015 Carbon Chain	04/27/22 15:00	5	04/22/22 14:00	
8260	04/27/22 15:00	5	04/22/22 14:00	
T221151-08 Drum # 3-B-8-B-9-B-10 [Soil] Sampled 04/12/22 10:30 (GMT-08:00) Pacific Time (US &				
[NO ANALYSES]				
T221151-09 Drum # 4-B-11 [Soil] Sampled 04/12/22 12:55 (GMT-08:00) Pacific Time (US &				
[NO ANALYSES]				
T221151-10 Drum # 5-B-7 [Soil] Sampled 04/13/22 09:55 (GMT-08:00) Pacific Time (US &				
[NO ANALYSES]				
T221151-11 Drum # 6-B-5-B-8 [Soil] Sampled 04/13/22 12:25 (GMT-08:00) Pacific Time (US &				
[NO ANALYSES]				
T221151-12 Drum # 7-B-4 [Soil] Sampled 04/13/22 14:00 (GMT-08:00) Pacific Time (US &				
[NO ANALYSES]				
T221151-13 Drum # 8-B-3-B-2 [Soil] Sampled 04/14/22 12:38 (GMT-08:00) Pacific Time (US &				
[NO ANALYSES]				

WORK ORDER

T221151

Client: Ninyo & Moore

Project Manager: Taii Iinuma

Project: OCSAN / Taft Sewer Project

Project Number: 211663001

Analysis	Due	TAT	Expires	Comments
T221151-14 Drum # 9-B-1 [Soil] Sampled 04/14/22 14:13 (GMT-08:00) Pacific Time (US & [NO ANALYSES]				
T221151-15 Drum # 10-B-14 [Soil] Sampled 04/15/22 11:20 (GMT-08:00) Pacific Time (US & [NO ANALYSES]				
T221151-16 Drum # 11-B-15 [Soil] Sampled 04/15/22 13:40 (GMT-08:00) Pacific Time (US & [NO ANALYSES]				
T221151-17 Drum # 12-B-16 [Soil] Sampled 04/18/22 10:10 (GMT-08:00) Pacific Time (US & [NO ANALYSES]				
T221151-18 Drum # 13-B-17 [Soil] Sampled 04/18/22 12:12 (GMT-08:00) Pacific Time (US & [NO ANALYSES]				
T221151-19 Drum # 14-B-18 [Soil] Sampled 04/18/22 13:55 (GMT-08:00) Pacific Time (US & [NO ANALYSES]				
T221151-20 Drum # 15-B-19 [Soil] Sampled 04/19/22 10:45 (GMT-08:00) Pacific Time (US & [NO ANALYSES]				
T221151-21 Drum # 16-B-20 [Soil] Sampled 04/19/22 13:10 (GMT-08:00) Pacific Time (US & [NO ANALYSES]				
T221151-22 Composite 7:1 Drum # 3-B-8-B-9-B-10 - Drum # 9-B-1 [Soil] Sampled 04/12/22 10:30 (GMT-08:00) Pacific Time (US & Composite samples Drum #3, Drum #4, Drum #5, Drum #6, Drum #7, Drum #8, Drum #9, # 8,9,10,11,12,13,1				
6010 Title 22	04/27/22 15:00	5	10/09/22 10:30	
8015 Carbon Chain	04/27/22 15:00	5	04/26/22 10:30	
8260	04/27/22 15:00	5	04/26/22 10:30	

WORK ORDER

T221151

Client: Ninyo & Moore

Project Manager: Taili Iinuma

Project: OCSAN / Taft Sewer Project

Project Number: 211663001

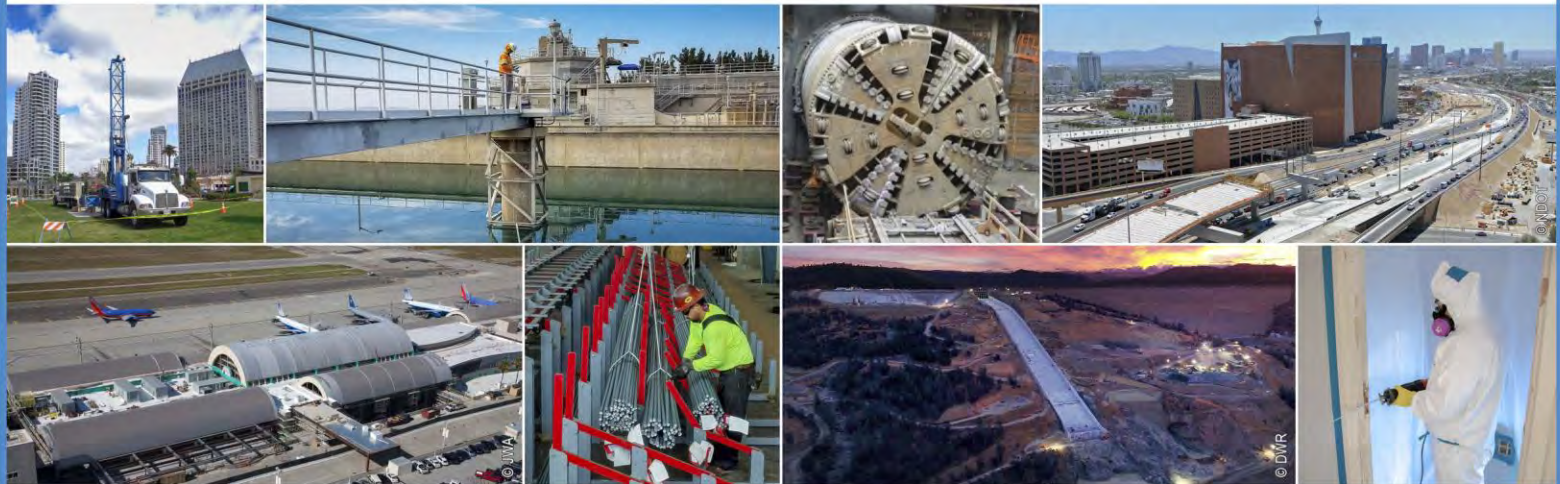
Analysis	Due	TAT	Expires	Comments
T221151-23 Composite 7:1 Drum # 10-B-14 - Drum # 16-B-20 [Soil] Sampled 04/15/22 11:20 (GMT-08:00) Pacific Time (US &				Composite samples Drum #10, Drum #11, Drum #12, Drum #13, Drum #14, Drum #15, Drum #16, # 15,16,17,1
6010 Title 22	04/27/22 15:00	5	10/12/22 11:20	
8015 Carbon Chain	04/27/22 15:00	5	04/29/22 11:20	
8260	04/27/22 15:00	5	04/29/22 11:20	

Analysis groups included in this work order

6010 Title 22

subgroup 6010B T22

7470/71 Hg



475 Goddard, Suite 200 | Irvine, California 92618 | p. 949.753.7070

ARIZONA | CALIFORNIA | COLORADO | NEVADA | TEXAS | UTAH

ninyoandmoore.com

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

APPENDIX E: NOISE IMPACT ANALYSIS

NOISE IMPACT ANALYSIS

TAFT SEWER IMPROVEMENT PROJECT

CITY OF ORANGE

Lead Agency:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92780

Prepared by:

Vista Environmental
1021 Didrickson Way
Laguna Beach, California 92651
949 510 5355
Greg Tonkovich, AICP

Project No. 20106

June 1, 2023

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ACRONYMS AND ABBREVIATIONS

ANSI	American National Standards Institute
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
City	City of Orange
cmu	Concrete masonry unit
CNEL	Community Noise Equivalent Level
dB	Decibel
dBA	A-weighted decibels
DOT	Department of Transportation
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
EPA	Environmental Protection Agency
Hz	Hertz
Ldn	Day-night average noise level
Leq	Equivalent sound level
Lmax	Maximum noise level
OC San	Orange County Sanitation District
ONAC	Federal Office of Noise Abatement and Control
OSB	Oriented Strand Board
OSHA	Occupational Safety and Health Administration
PPV	Peak particle velocity
RMS	Root mean square
SEL	Single Event Level or Sound Exposure Level
STC	Sound Transmission Class
UMTA	Federal Urban Mass Transit Administration
VdB	Vibration velocity level in decibels

1.0 INTRODUCTION

1.1 Purpose of Analysis and Study Objectives

This Noise Impact Analysis has been prepared to determine the noise impacts associated with the proposed Taft Sewer Improvement project (proposed project). The following is provided in this report:

- A description of the study area and the proposed project;
- Information regarding the fundamentals of noise;
- Information regarding the fundamentals of vibration;
- A description of the local noise guidelines and standards;
- An evaluation of the current noise environment;
- An analysis of the potential short-term construction-related noise and vibration impacts from the proposed project; and,
- An analysis of long-term operations-related noise and vibration impacts from the proposed project.

1.2 Site Location and Study Area

The project site is located in the City of Orange (City). The project would be located within the existing City right-of-way, along Meats Avenue west from Santiago Boulevard to Breckenridge Street, south along Sacramento Street, west along Taft Avenue (runs under State Route 55), south along Tustin Street, and west along Taft Avenue to Glassell Street. The project site plan is shown in Figure 1.

Orange County Sanitation District Facilities Master Plan

The proposed project has been identified as part of the Collection System Improvements in the Orange County Sanitation District Facilities Master Plan and the associated *Draft Orange County Sanitation District Facilities Master Plan Program Environmental Impact Report* (Facilities Master Plan PEIR), prepared by Dudek, September 2020.

Sensitive Receptors in Project Vicinity

The nearest sensitive receptors to the project site are homes located on both sides of Meats Avenue, Breckenridge Street, Sacramento Street, and on Taft Avenue west of Tustin Street. In addition, there are over a dozen schools and/or faith-based facilities located within one quarter mile of the project site and adjacent to Taft Avenue.

1.3 Proposed Project Description

The existing Taft Branch sewer line is a vitrified clay gravity sewer that varies in size from 12 to 18 inches and was built in 1960. Since that time the area has grown significantly. As identified in the Orange County Sanitation District (OC San) 2019 Master Plan Update (MPU) Report, this sewer line showed a potential risk of sanitary sewer outflows between maintenance holes #SAR250-0280 and #SAR250-0085. The proposed project would provide an overall design solution to increase the capacity of the Taft Branch sewer to convey wet-weather flows and replace 36 maintenance holes to OC San current standards.

The proposed project involves construction and operation of approximately 11,000 linear feet of vitrified clay sewer pipelines (VCP), ranging in size from 18 to 21 inches in diameter, and approximately 500 linear feet of 8-inch service laterals. The project would connect to existing City of Orange sewers at the intersection of Meats Avenue and Santiago Boulevard and would run to the existing OC San sewer at the intersection of Taft Avenue and Glassell Street. The project would abandon approximately 8,000 feet of existing OC San sewer pipeline and construct/replace 39 sanitary sewer maintenance holes.

Pipeline Construction

The proposed 11,000 linear foot pipeline would be placed within the City of Orange right-of-way using a combination of open-trench and trenchless construction methods. The trench width would be 4 – 6 feet, while the depth would range from 8 to 25 feet. The pipeline alignment would be designed to avoid conflict with existing utilities. An additional 12 inches of pavement on each side of the trench would be restored during trenching activities. The contractor would grind and overlay the new paving a lane width or more, depending on exact location where the alignment sits within the street. The width of resurfacing would be up to the nearest lane line or gutter in accordance with the City of Orange Trench Backfill and Roadway Repair Standard Plans.

Construction Schedule

Project construction is anticipated to begin approximately January 2024 and continue until December 2025. Construction would include the following four phases:

- Mobilization/utility potholing – January 2024 to April 2024
- Trenching/Pipeline/Maintenance Hole installation – May 2024 to June 2025. The pipelines would be constructed at an average rate of 50 linear feet per day, depending on the conditions, extent of existing utilities and traffic control, and permitted work hours. Maintenance holes would be constructed by a second crew following behind the pipeline installation. Therefore, the total duration of construction for the pipeline is estimated to last approximately 12 months.
- Final Paving/Restoration – July 2025 to October 2025
- Demobilization – November/December 2025

Construction of each pipeline segment would proceed in the following sequence with average invert depth shown in Table A.

Table A – Proposed Construction Sequence

Segment	Location	Activity	Length (LF)	Invert Depth (ft)	Construction Hours
1	Taft Ave (west)/ Glassell Street	Replace (E) 15-inch SS with 21-inch SS	1,150	17	Day-time, Monday – Friday, 8:30 a.m. – 4:30 p.m.
2	Taft Ave (west)/ Cambridge Street	Replace (E) 15-inch SS with 21-inch SS	1,450	16	Day-time, Monday – Friday, 8:30 a.m. – 4:30 p.m.
3	Taft Ave / Tustin St	Construct (N) 21-inch SS	2,500	13	Day-time, Monday – Friday, 8:30 a.m. – 4:30 p.m.
4	Tustin St	Replace (E) 18-inch SS with 21-inch SS	500	12	Night-time, Monday – Friday, 9:00 p.m. – 5:00 a.m.
5	Taft Ave (east)	Replace (E) 12-inch SS with 21-inch SS	1,400	23	Day-time, Monday – Friday, 8:30 a.m. – 4:30 p.m.

Segment	Location	Activity	Length (LF)	Invert Depth (ft)	Construction Hours
6	Sacramento St	Construct (N) 18-inch SS	2,300	17	Day-time, Monday – Friday, 8:30 a.m. – 4:30 p.m.
7	Meats Ave	Replace (E) 12-inch SS with 18-inch SS	1,400	13	Day-time, Monday – Friday, 8:30 a.m. – 4:30 p.m.

Equipment Staging

Two construction staging area options are included in this analysis, however, the size, location and number of staging areas would be finalized as part of the pre-construction. For the purposes of this analysis, it was assumed each construction staging area would be up to 200 by 200 feet in size and located in vacant land owned by SCE on Taft Avenue with access to proposed alignment. The two optional located for the staging areas are shown in Figure 1. If the identified staging area options cannot accommodate all equipment storage/staging for the proposed project, the construction contractor may use the Taft Avenue right-of-way for the purpose of storage, staging, and/or pipe stringing. Other existing OC San or City property would be utilized as necessary for staging and intermediate storage for the installation of the sewer pipelines, or the contractor would be responsible for securing suitable temporary equipment storage/staging sites prior to construction.

Operations

The pipeline and maintenance holes would not be associated with additional OC San operations and maintenance (O&M) activities above what is currently occurring with the existing pipeline. Project O&M activities would include inspection and repair, as necessary, of pipeline and maintenance holes.

1.4 Executive Summary

Standard Noise Regulatory Conditions

The proposed project will be required to comply with the following regulatory conditions from the City of Orange and State of California.

City of Orange Noise Regulations

The following lists the noise and vibration regulations from the Municipal Code that are applicable, but not limited to the proposed project.

- Section 8.24.040 Exterior Noise
- Section 8.24.050(E) Construction Noise Exemptions

State of California Noise Regulations

The following lists the State of California noise regulations that are applicable, but not limited to the proposed project.

- California Vehicle Code Section 2700-27207 – On Road Vehicle Noise Limits
- California Vehicle Code Section 38365-38350 – Off-Road Vehicle Noise Limits

Summary of Analysis Results

The following is a summary of the proposed project's impacts with regard to the State CEQA Guidelines noise checklist questions.

Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Potentially significant impact. Mitigation Measure Project-MM-NOI-1 has been provided to reduce this impact to less than significant.

Generation of excessive groundborne vibration or groundborne noise levels?

Less than significant impact.

For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No impact.

1.5 Applicable Measures from the Facilities Master Plan PEIR

The proposed project was previously analyzed as part of the Facilities Master Plan PEIR and as such the noise and vibration-related Project Design Features and Mitigation Measures from the Facilities Master Plan PEIR are applicable to the proposed project and are listed below.

PDF-NOI-1

To address construction noise impacts, the Orange County Sanitation District has a process in place as follows:

- A. Public outreach is conducted in communities that could be impacted by construction activities so that the public is aware of the work that must be conducted, where the work will occur, and the timing of the proposed work.
- B. At least five (5) days prior to the start of construction activities, the Sanitation District will notify the surrounding residents and businesses by mail or other means of distribution. For projects located outside of Plant 1 or Plant 2, the construction contractor will post signs in the project vicinity that identify the Orange County Sanitation District as the project owner and a general contract phone number. Sign location(s) will be identified with local jurisdiction approval.
- C. Once work begins, the contractor has the responsibility to address noise and vibration-related complaints.

MM-NOI-1

For Facilities Master Plan (FMP) projects located within 500 feet of noise-sensitive receivers (residences, hotels and motels, educational institutions, libraries, hospitals, and clinics), the following measures shall be implemented:

- A. All mobile or fixed noise-producing equipment used on an FMP project that is regulated for noise output by a local, state, or federal agency shall comply with such regulation while in the course of program activity.

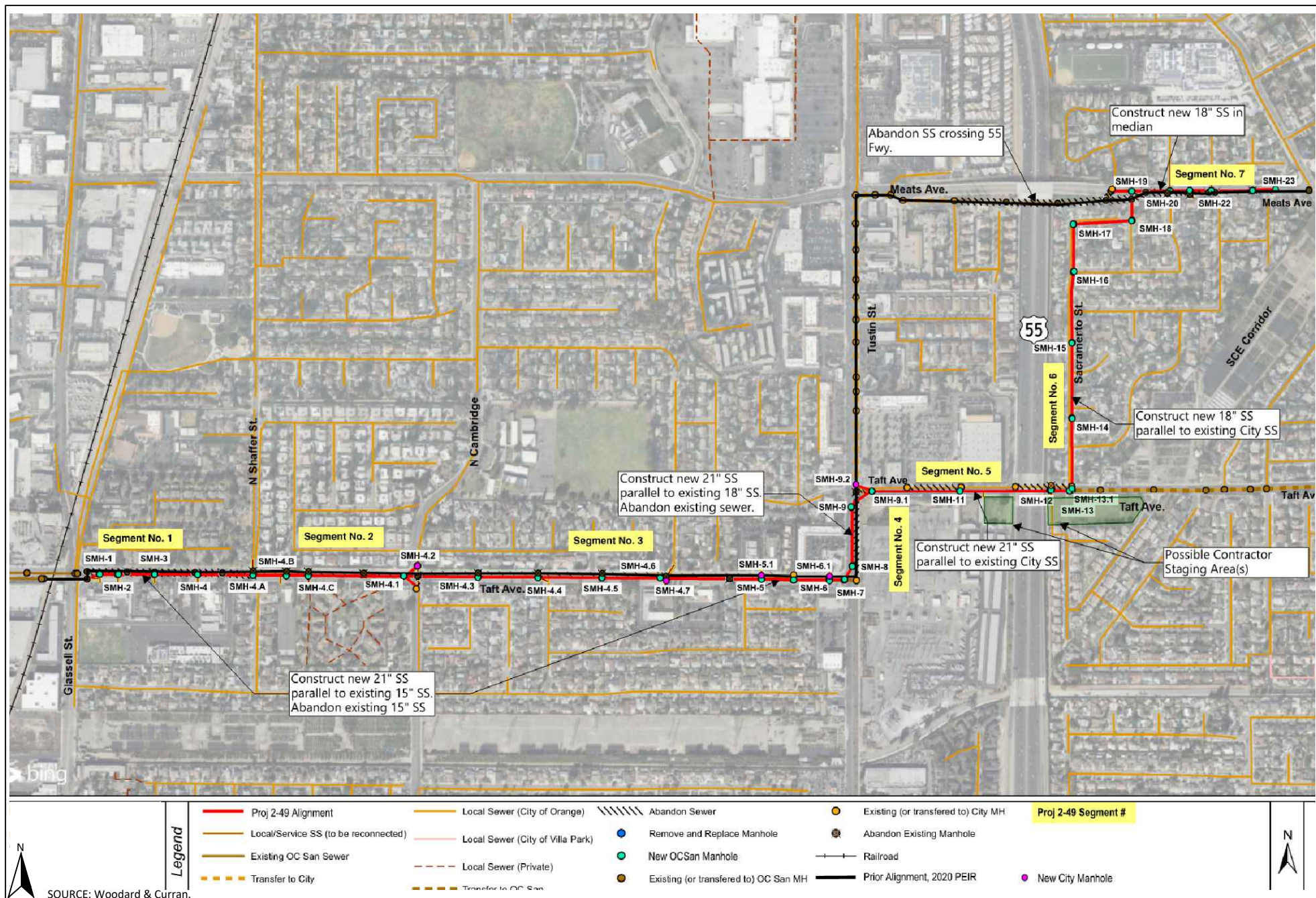
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- B. Construction equipment shall be properly outfitted and maintained with manufacturer-recommended noise-reduction devices to minimize construction-generated noise.
 - C. Electrically powered equipment shall be used instead of pneumatic or internal-combustion-powered equipment, where feasible.
 - D. Stationary noise sources such as generators or pumps shall be located at least 100 feet from noise-sensitive land uses as feasible.
 - E. Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.
 - F. Construction site and haul-road speed limits shall be established and enforced during the construction period.
 - G. As feasible, the hours of construction, including noise-generating activities and all spoils and material transport, shall be restricted to the time periods and days permitted by the local noise or other applicable ordinances. As necessary, the Sanitation District shall coordinate with the applicable local jurisdiction regarding activities that are not consistent with local ordinances to avoid/minimize impacts.
 - H. The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. Additionally, pursuant to Occupational Safety and Health Act Sections 1926.601(b)(4) and 1926.602(a)(9), a device that uses broadband “white noise” instead of a single-tone alarm may be used if it is shown to be effective.
 - I. The Orange County Sanitation District or its designees shall coordinate with local jurisdictions and sensitive receptors regarding the proposed FMP to address any potential project-specific noise-related issues prior to commencement of construction activities.
 - J. Noise-reduction measures such as sound blankets or temporary sound walls shall be used to reduce noise from noise-generating equipment and activities during construction.

1.6 Mitigation Measures for the Proposed Project

This analysis found through adherence to the noise and vibration regulations detailed in Section 1.4 above, adherence to the Facilities Master Plan PEIR measures, and through implementation of the following mitigation measure all noise and vibration impacts would be reduced to less than significant levels.

Project-MM-NOI-1

If the SCE Staging Area located on the east side of State Route 55 is utilized as part of the proposed project, all activities within this Staging Area shall be limited to when construction activities are exempt from the City noise standards as detailed in Section 8.24.050(E) of the City of Orange Municipal Code. No time of day restrictions are placed on the SCE Staging Area located on the west side of State Route 55.



SOURCE: Woodard & Curran.

Figure 1
Project Site Plan

2.0 NOISE FUNDAMENTALS

Noise is defined as unwanted sound. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Sound is produced by the vibration of sound pressure waves in the air. Sound pressure levels are used to measure the intensity of sound and are described in terms of decibels. The decibel (dB) is a logarithmic unit which expresses the ratio of the sound pressure level being measured to a standard reference level. A-weighted decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear.

2.1 Noise Descriptors

Noise Equivalent sound levels are not measured directly, but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (Leq) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. The peak traffic hour Leq is the noise metric used by California Department of Transportation (Caltrans) for all traffic noise impact analyses.

The Day-Night Average Level (Ldn) is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of ten decibels to sound levels at night between 10 p.m. and 7 a.m. While the Community Noise Equivalent Level (CNEL) is similar to the Ldn, except that it has another addition of 4.77 decibels to sound levels during the evening hours between 7 p.m. and 10 p.m. These additions are made to the sound levels at these time periods because during the evening and nighttime hours, when compared to daytime hours, there is a decrease in the ambient noise levels, which creates an increased sensitivity to sounds. For this reason, the sound appears louder in the evening and nighttime hours and is weighted accordingly. The City of Orange relies on the CNEL noise standard to assess transportation-related impacts on noise sensitive land uses.

2.2 Tone Noise

A pure tone noise is a noise produced at a single frequency and laboratory tests have shown that humans are more perceptible to changes in noise levels of a pure tone. For a noise source to contain a “pure tone,” there must be a significantly higher A-weighted sound energy in a given frequency band than in the neighboring bands, thereby causing the noise source to “stand out” against other noise sources. A pure tone occurs if the sound pressure level in the one-third octave band with the tone exceeds the average of the sound pressure levels of the two contiguous one-third octave bands by:

- 5 dB for center frequencies of 500 hertz (Hz) and above
- 8 dB for center frequencies between 160 and 400 Hz
- 15 dB for center frequencies of 125 Hz or less

2.3 Noise Propagation

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on whether the source is a point or line source as well as ground absorption, atmospheric effects and refraction, and shielding by natural and manmade features. Sound

from point sources, such as air conditioning condensers, radiate uniformly outward as it travels away from the source in a spherical pattern. The noise drop-off rate associated with this geometric spreading is 6 dBA per each doubling of the distance (dBA/DD). Transportation noise sources such as roadways are typically analyzed as line sources, since at any given moment the receiver may be impacted by noise from multiple vehicles at various locations along the roadway. Because of the geometry of a line source, the noise drop-off rate associated with the geometric spreading of a line source is 3 dBA/DD.

2.4 Ground Absorption

The sound drop-off rate is highly dependent on the conditions of the land between the noise source and receiver. To account for this ground-effect attenuation (absorption), two types of site conditions are commonly used in traffic noise models, soft-site and hard-site conditions. Soft-site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. For point sources, a drop-off rate of 7.5 dBA/DD is typically observed over soft ground with landscaping, as compared with a 6.0 dBA/DD drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth. For line sources a 4.5 dBA/DD is typically observed for soft-site conditions compared to the 3.0 dBA/DD drop-off rate for hard-site conditions. Caltrans research has shown that the use of soft-site conditions is more appropriate for the application of the Federal Highway Administration (FHWA) traffic noise prediction model used in this analysis.

3.0 GROUND-BORNE VIBRATION FUNDAMENTALS

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

3.1 *Vibration Descriptors*

There are several different methods that are used to quantify vibration amplitude such as the maximum instantaneous peak in the vibrations velocity, which is known as the peak particle velocity (PPV) or the root mean square (rms) amplitude of the vibration velocity. Due to the typically small amplitudes of vibrations, vibration velocity is often expressed in decibels and is denoted as (L_v) and is based on the rms velocity amplitude. A commonly used abbreviation is “VdB”, which in this text, is when L_v is based on the reference quantity of 1 micro inch per second.

3.2 *Vibration Perception*

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Off-site sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration.

3.3 *Vibration Propagation*

The propagation of ground-borne vibration is not as simple to model as airborne noise. This is due to the fact that noise in the air travels through a relatively uniform median, while ground-borne vibrations travel through the earth which may contain significant geological differences. There are three main types of vibration propagation; surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground’s surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a “push-pull” fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse or “side-to-side and perpendicular to the direction of propagation.”

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

4.0 REGULATORY SETTING

The project site is located in the City of Orange. Noise regulations are addressed through the efforts of various federal, state, and local government agencies. The agencies responsible for regulating noise are discussed below.

4.1 Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce
- Assisting state and local abatement efforts
- Promoting noise education and research

The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration (OSHA) agency prohibits exposure of workers to excessive sound levels. The Department of Transportation (DOT) assumed a significant role in noise control through its various operating agencies. The Federal Aviation Administration (FAA) regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the Federal Transit Administration (FTA), which regulates transit noise, while freeways that are part of the interstate highway system are regulated by the Federal Highway Administration (FHWA). Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that “noise sensitive” uses are either prohibited from being sited adjacent to a highway or, alternately that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Although the proposed project is not under the jurisdiction of the FTA, the FTA is the only agency that provides specific guidance for construction noise. The FTA recommends developing construction noise criteria on a project-specific basis that utilizes local noise ordinances if possible. However, local noise ordinances usually relates to nuisance and hours of allowed activity and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the noise impacts of a construction project. Project construction noise criteria should take into account the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land uses. The FTA standards are based on extensive studies by the FTA and other governmental agencies on the human effects and reaction to noise and a summary of the FTA findings for a general construction noise assessment are provided below in Table B.

Table B – FTA General Assessment Construction Noise Criteria

Land Use	Day (dBA Leq _(1-hour))	Night (dBA Leq _(1-hour))
Residential	90	80
Commercial	100	100
Industrial	100	100

Source: Federal Transit Administration, 2018.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation sources, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

4.2 State Regulations

Noise Standards

California Department of Health Services Office of Noise Control

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regulatory tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix,” which allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

California Noise Insulation Standards

Title 24, Chapter 1, Article 4 of the California Administrative Code (California Noise Insulation Standards) requires noise insulation in new hotels, motels, apartment houses, and dwellings (other than single-family detached housing) that provides an annual average noise level of no more than 45 dBA CNEL. When such structures are located within a 60-dBA CNEL (or greater) noise contour, an acoustical analysis is required to ensure that interior levels do not exceed the 45-dBA CNEL annual threshold. In addition, Title 21, Chapter 6, Article 1 of the California Administrative Code requires that all habitable rooms, hospitals, convalescent homes, and places of worship shall have an interior CNEL of 45 dB or less due to aircraft noise.

Government Code Section 65302

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

California Vehicle Code Section 27200-27207 – On-Road Vehicle Noise

California Vehicle Code Section 27200-27207 provides noise limits for vehicles operated in California. For vehicles over 10,000 pounds noise is limited to 88 dB for vehicles manufactured before 1973, 86 dB for vehicles manufactured before 1975, 83 dB for vehicles manufactured before 1988, and 80 dB for vehicles manufactured after 1987. All measurements are based at 50 feet from the vehicle.

California Vehicle Section 38365-38380 – Off-Road Vehicle Noise

California Vehicle Code Section 38365-38380 provides noise limits for off-highway motor vehicles operated in California. 92 dBA for vehicles manufactured before 1973, 88 dBA for vehicles manufactured before 1975, 86 dBA for vehicles manufactured before 1986, and 82 dBA for vehicles manufactured after December 31, 1985. All measurements are based at 50 feet from the vehicle.

Vibration Standards

Title 14 of the California Administrative Code Section 15000 requires that all state and local agencies implement the California Environmental Quality Act (CEQA) Guidelines, which requires the analysis of exposure of persons to excessive groundborne vibration. However, no statute has been adopted by the state that quantifies the level at which excessive groundborne vibration occurs.

The *Transportation- and Construction Vibration Guidance Manual*, prepared by Caltrans, April 2020, provides practical guidance to Caltrans engineers, planners, and consultants who must address vibration issues associated with the construction, operation, and maintenance of Caltrans projects. However, this manual is also used as a reference point by many lead agencies and CEQA practitioners throughout California, as it provides numeric thresholds for vibration impacts. Thresholds are established for continuous (construction-related) and transient (transportation-related) sources of vibration, which found that the human response becomes distinctly perceptible at 0.25 inch per second PPV for transient sources and 0.04 inch per second PPV for continuous sources.

4.3 Local Regulations

The City of Orange General Plan and Municipal Code establishes the following applicable policies related to noise and vibration.

City of Orange General Plan

The City of Orange has developed its own land use compatibility standards based on recommended parameters from the California Governor's Office of Planning and Research that rate compatibility. Using the State's land use compatibility guidelines, the City has established interior and exterior noise standards. The City's compatibility standards provide only for normally acceptable conditions based on State recommendations and City land use designations. The City's Land Use Compatibility standards are presented in Table C.

Table C – City of Orange Maximum Allowable Noise Exposure – Transportation Sources

Land Use		CNEL (dBA)	
Land Use Designations	Uses	Interior ^{1,3}	Exterior ²
Estate Low Density Residential	Single-family, duplex, and multiple-family	45	65
Low Density Residential			
Low Medium Density Residential	Mobile home park	N/A	65
Medium Density Residential	Single-family	45	65
Neighborhood	Mobile home park	N/A	65
Mixed-Use	Multiple-family, mixed use	45	65 ^{4,5}
Neighborhood Office Professional	Transient lodging-motels, hotels	45	65
Old Towne Mixed-use	Sports arenas, outdoor spectator sports	N/A	N/A
General Commercial	Auditoriums, concert halls, amphitheaters	45	N/A
Yorba Commercial Overlay			
Urban Mixed-use	Office buildings, business, commercial and professional	50	N/A
Urban Office Professional			
Light Industrial	Manufacturing, utilities, agriculture	N/A	N/A
Industrial			
Public Facilities and Institutions	Schools, nursing homes, day care facilities, hospitals, convalescent facilities, dormitories	45	65

Table C – City of Orange Maximum Allowable Noise Exposure – Transportation Sources

Land Use		CNEL (dBA)	
Land Use Designations	Uses	Interior ^{1,3}	Exterior ²
	Government Facilities-offices, fire stations, community buildings	45	N/A
	Places of Worship, Churches	45	N/A
	Libraries	45	N/A
	Utilities	N/A	N/A
	Cemeteries	N/A	N/A
Recreation Commercial Open Space	Playgrounds, neighborhood parks	N/A	70
Open Space-Park Open Space-Ridgeline Resource Area	Golf courses, riding stables, water recreation, cemeteries	N/A	N/A

Notes:

- (1) Interior habitable environment excludes bathrooms, closets and corridors.
- (2) Exterior noise level standard to be applied at outdoor activity areas; such as private yards, private patio or balcony of a multi-family residence. Where the location of an outdoor activity area is unknown or not applicable, the noise standard shall be applied inside the property line of the receiving land use.
- (3) Interior noise standards shall be satisfied with windows in the closed position. Mechanical ventilation shall be provided per Uniform Building Code (UBC) requirements.
- (4) Within the Urban Mixed-Use, Neighborhood Mixed-Use, Old Towne Mixed-Use, and Medium Density Residential land use designations, exterior space standards apply only to common outdoor recreational areas.
- (5) Within Urban Mixed-Use and Medium Density Residential land use designations, exterior noise levels on private patios or balconies located within 250 feet of freeways (I-5, SR-57, SR-55, SR-22, or SR-241) and Smart Streets and Principal Arterial identified in the Circulation & Mobility Element that exceed 70 dB should provide additional common open space.

N/A=Not Applicable to specified land use category or designation.

Source: City of Orange General Plan Table N-3.

The City's maximum allowable noise exposure levels from stationary sources are defined in Table N-4 of the General Plan and reprinted below in Table D.

Table D – City of Orange Maximum Allowable Noise Exposure – Stationary Sources

Noise Level Descriptor	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly Equivalent Level (Leq), dBA	55	45
Maximum Level (Lmax), dBA	70	65

Notes:

- (1) These standards apply to new or existing noise sensitive land uses affected by new or existing non-transportation noise sources, as determined at the outdoor activity area of the receiving land use. However, these noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g. caretaker dwellings).
- (2) Each of the noise levels specified above should be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. Such noises are generally considered by residents to be particularly annoying and are a primary source of noise complaints. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g. caretaker dwellings).
- (3) No standards have been included for interior noise levels. Standards construction practices that comply with exterior noise levels identified in this table generally result in acceptable interior noise levels.
- (4) The City may impose noise level standards which are more or less restrictive than those specified above based upon determination of existing low or high ambient noise levels. If the existing ambient noise level exceeds the standards listed in Table N-4, then the noise level standards shall be increased at 3 dB increments to encompass the ambient noise environment. Noise level standards incorporating adjustments for existing ambient noise levels shall not exceed a maximum of 70 dB Leq.

Source: City of Orange General Plan Table N-4.

For City analysis of noise impacts and determining appropriate mitigation under the California Environmental Quality Act (CEQA), in addition to the maximum allowable noise level standards outlined in Tables N-3 (Table C above) and N-4 (Table D above) from the General Plan, an increase in ambient noise levels is assumed to be a significant noise impact if a project causes ambient noise levels to exceed the following:

- Where the existing ambient noise level is less than 60 dBA, a project related permanent increase in ambient noise levels of 5 dBA CNEL or greater.
- Where the existing ambient noise level is greater than 65 dBA, a project related permanent increase in ambient noise levels of 3 dBA CNEL or greater.

In addition to the standards provided above, the City of Orange General Plan includes the following goals and policies that are applicable to the proposed project

Goals and Policies

GOAL 2.0: Minimize vehicular traffic noise in residential areas and near noise-sensitive land uses.

Policy 2.2: Encourage coordinated site planning and traffic control measures that minimize traffic noise in noise-sensitive land use areas.

GOAL 7.0: Minimize construction, maintenance vehicle, and nuisance noise in residential areas and near noise-sensitive land uses.

Policy 7.2: Require developers and contractors to employ noise minimizing techniques during construction and maintenance operations.

Policy 7.3: Limit the hours of construction and maintenance operations located adjacent to noise-sensitive land uses.

Policy 7.4: Encourage limitations on the hours of operations and deliveries for commercial, mixed-use, and industrial uses abutting residential zones.

City of Orange Municipal Code

The City of Orange Municipal Code establishes the following applicable standards related to noise.

Section 8.24.020 Definitions.

The following words, phrases and terms as used in this chapter shall have the meaning as indicated below:

A. "Ambient noise level" means the all-encompassing noise level associated with a given environment, being a composite of sounds from all sources, excluding the alleged offensive noise at the location and approximate time at which a comparison with the alleged offensive noise is to be made.

B. "Adjusted ambient noise level" means the measured ambient noise level plus 3 dB (A). Three (3) dB (A) is the industry-accepted threshold of human perceptibility for a change in noise environment.

Section 8.24.040 Exterior Noise Standards.

A. The following noise standards [Table E] for fixed noise sources, unless otherwise specifically indicated, shall apply to all residential property:

Table E – City of Orange Municipal Code Exterior Noise Standards

Standard	Noise Level	Time Period
Hourly Average (L_{eq})	55 dB (A)	7:00 a.m. – 10:00 p.m.
	50 dB (A)	10:00 p.m. – 7:00 a.m.
Maximum Level	70 dB (A)	7:00 a.m. – 10:00 p.m.
	65 dB (A)	10:00 p.m. – 7:00 a.m.

Source: City of Orange Municipal Code Section 8.24.040.

B. It is unlawful for any person at any location within the City to create any noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any other residential property to exceed the noise standards identified in Table 8.24.040. For multi-family residential or mixed use developments located within the City’s Urban Mixed Use, Neighborhood Mixed Use, Old Towne Mixed Use or Medium Density Residential General Plan land use districts, exterior noise standards shall apply to common recreation areas only and shall not apply to private exterior space (such as a private yard, patio, or balcony)

C. In the event the ambient noise level exceeds the noise standards identified in Table 8.24.040 of this section, the “adjusted ambient noise level” shall be applied as the noise standard. In cases where the noise standard is adjusted due to a high ambient noise level, the noise standard shall not exceed the “adjusted ambient noise level”, or 70 dB (A), whichever is less. In cases where the ambient noise level is already greater than 70 dB (A), the ambient noise level shall be applied as the noise standard.

D. Each of the noise limits specified in Table 8.240.040 shall be reduced by five dB(A) for impact or simple tone noises, recurring impulsive noises, or for noises consisting of speech or music. (Ord. No. 1-4 § I, 8-12-14)

8.24.050 Exemptions from Chapter Provisions.

The following activities shall be exempted from the provisions of this chapter:

E. Noise sources associated with construction, repair, remodeling, or grading of any real property, provided said activities take place between the hours of 7:00 a.m. and 8:00 p.m. on any day except for Sunday or a Federal holiday, or between the hours of 9:00 a.m. and 8:00 p.m. on Sunday or a Federal holiday. Noise generated outside of the hours specified are subject to the noise standards identified in Table 8.24.040;

I. Noise sources associated with the maintenance of real property, provided such activities take place between the hours of 7:00 A.M. and 8:00 P.M. on any day except Sunday or a Federal holiday, or between the hours of 9:00 A.M. and 8:00 P.M. on Sunday or a Federal holiday;

K. Any maintenance or construction activity undertaken by a public agency or utility within street right of way;

L. Mobile noise sources including but not limited to operational noise from trains, or automobiles or trucks traveling on roadways. Transportation noise as related to noise/land use compatibility is subject to the City's General Plan Noise Element;

M. Any activity to the extent regulation thereof has been preempted by State or Federal Law. (Ord. No. 1-4 § I, 8-12-14)

8.24.060 Special Provisions for Schools, Hospitals and Churches.

It is unlawful for any person to create any noise which causes the noise level at any school, hospital, or church, while the same is in use, to exceed the noise limits as specified in Section 8.24.040, or which noise level unreasonably interferes with the use of such institutions. (Ord. No. 1-4 § I, 8-12-14)

5.0 EXISTING NOISE CONDITIONS

To determine the existing noise levels, noise measurements have been taken in the vicinity of the project site. The field survey noted that noise within the proposed project area is generally characterized by vehicle traffic on the nearby roadways, including State Route 55. Since the portion of the sewer line that will be installed in the vicinity of Tustin Street, will occur during the nighttime, 24 hour noise measurements were taken at the nearest sensitive receptors to the Tustin Street portion of the project site. For the rest of the project area where construction would occur during the daytime, short-term noise measurements were taken. The following describes the measurement procedures, measurement locations, noise measurement results, and the modeling of the existing noise environment.

5.1 Noise Measurement Procedures

Noise Measurement Equipment

24-Hour Noise Measurements

The 24-hour noise measurements were taken using three Larson Davis Model LXT1 Type 1 sound level meters programmed in “slow” mode to record the sound pressure level at 1-second intervals for 24 hours in “A” weighted form. In addition, the L_{eq} averaged over the entire measuring time and L_{max} were recorded with the sound level meters. The sound level meters and microphones were mounted on poles and fences in the vicinity of the project site. The noise meters were placed between four and six feet above the ground and were equipped with windscreens during all measurements. The noise meters were calibrated before and after the monitoring using a Larson Davis Cal200 calibrator. All noise level measurement equipment meets American National Standards Institute specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA).

Short-Term Noise Measurements

The short-term noise measurements were taken using a Larson-Davis Model 831 Type 1 precision sound level meter programmed in “slow” mode to record noise levels in “A” weighted form as well as the frequency spectrum of the noise broken down into 1/3 octaves. The sound level meter and microphone were mounted on a tripod five feet above the ground and were equipped with a windscreen during all measurements. The sound level meter was calibrated before and after the monitoring using a Larson-Davis calibrator, Model CAL 200. The accuracy of the calibrator is maintained through a program established through the manufacturer and is traceable to the National Bureau of Standards. The unit meets the requirements of ANSI Standard S1.4-1984 and IEC Standard 942: 1988 for Class 1 equipment. All noise level measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA).

Noise Measurement Locations

The noise monitoring locations were selected in order to obtain noise levels in the vicinity of the nearest homes to the project site. Descriptions of the noise monitoring sites are provided below in Table F and Table G and are shown in Figure 2. Appendix A includes a photo index of the study area and noise level measurement locations.

Noise Measurement Timing and Climate

24-Hour Noise Measurements

The 24-hour noise measurements were recorded between 9:37 a.m. on Tuesday, April 4, 2023 and 9:54 a.m. on Wednesday, April 5, 2023. At the start of the noise measurements, the sky was clear (no clouds), the temperature was 60 degrees Fahrenheit, the humidity was 31 percent, barometric pressure was 29.79 inches of mercury, and the wind was blowing at an average rate of three miles per hour. Overnight, the temperature dropped to 44 degrees Fahrenheit and the humidity peaked at 75 percent. At the conclusion of the noise measurements, the sky was clear, the temperature was 65 degrees Fahrenheit, the humidity was 37 percent, barometric pressure was 29.82 inches of mercury, and the wind was blowing at an average rate of six miles per hour.

Short-Term Noise Measurements

Each short-term noise measurement was recorded for a 15 minute duration. The short-term noise measurements were recorded between 10:06 a.m. and 11:03 a.m. on Tuesday, April 4, 2023. At the start of the noise measurements, the sky was clear, the temperature was 60 degrees Fahrenheit, the humidity was 31 percent, barometric pressure was 29.79 inches of mercury, and the wind was blowing at an average rate of 3 miles per hour. At the conclusion of the short-term noise measurements, the sky was clear, the temperature was 60 degrees Fahrenheit, the humidity was 26 percent, barometric pressure was 29.77 inches of mercury, and the wind was blowing at an average rate of two miles per hour.

5.2 Noise Measurement Results

24-Hour Noise Measurements Results

The results of the 24-hour noise level measurements are presented in Table F. The measured sound pressure levels in dBA have been used to calculate the minimum and maximum L_{eq} averaged over 1-hour intervals. Table F also shows the daytime L_{eq} and nighttime L_{eq} and the CNEL based on the entire 24-hour measurement time. The CNEL was calculated through use of Equation 2-23 from *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (TeNS), prepared by Caltrans, September 2013. The noise monitoring data printouts are included in Appendix B. Figure 3 shows a graph of the 24-hour noise measurements.

Table F – Existing (Ambient) 24-hour Noise Level Measurements

Site No.	Site Description	Average (dBA L_{eq})		1-hr Average (dBA $L_{eq}/Time$)		Average (dBA CNEL)
		Daytime ¹	Nighttime ²	Minimum	Maximum	
L1	Located on a wall on the south side of Taft Avenue (west) that is on shared property line with Firestone Auto Care and home at 1549 Candlewood Avenue, approximately 60 feet south of Taft Avenue centerline.	64.3	62.0	54.0 12:55 a.m.	67.0 2:42 p.m.	69.0
L2	Located on a street light on the north side of Briardale Avenue, approximately 20 feet north of Briardale Avenue centerline and 230 feet west of Tustin Street centerline.	61.4	59.1	50.7 12:55 a.m.	70.9 11:28 a.m.	66.0

Site No.	Site Description	Average (dBA L _{eq})		1-hr Average (dBA L _{eq} /Time)		Average (dBA CNEL)
		Daytime ¹	Nighttime ²	Minimum	Maximum	
L3	Located on a power pole on the north side of Taft Avenue (east), approximately 30 feet north of Taft Avenue centerline and 55 feet west of Sacramento Street centerline.	69.8	64.0	54.1 1:40 a.m.	72.6 7:00 a.m.	72.1

Notes:

¹ Daytime is defined as 7:00 a.m. to 10:00 p.m. (Section 8.24.040 of the Municipal Code)

² Nighttime define as 10:00 p.m. to 7:00 a.m. (Section 8.24.040 of the Municipal Code)

Source: Noise measurements taken between Tuesday, April 4 and Wednesday, April 5, 2023.

Short-Term Noise Measurements Results

The short-term noise level measurement results are presented in Table F and the noise monitoring data printouts are included in Appendix B.

Table G – Existing (Ambient) Short-Term Noise Level Measurements

Site No.	Description	Primary Noise Sources	Start Time of Measurement	Measured Noise Level	
				dBA Leq	dBA Lmax
S1	Located on the front yard of home at 2087 Mori Lane, approximately 50 feet south of Meats Avenue centerline and 35 feet east of Mori Lane centerline.	Vehicles on Meats Avenue	10:06 a.m.	63.8	74.1
S2	Located on the front yard of home at 2060 Breckenridge Street, approximately 40 feet west of Breckenridge Street centerline and 30 feet south of Sacramento Street centerline.	Vehicles on Breckenridge Street	10:26 a.m.	55.8	75.0
S3	Located on the front yard of home at 131 Taft Avenue, approximately 50 feet north of Taft Avenue centerline and 240 feet east of Glassell Street centerline.	Vehicles on Taft Avenue	10:48 a.m.	62.4	75.3

Source: Noise measurements taken on Tuesday, April 4, 2023.

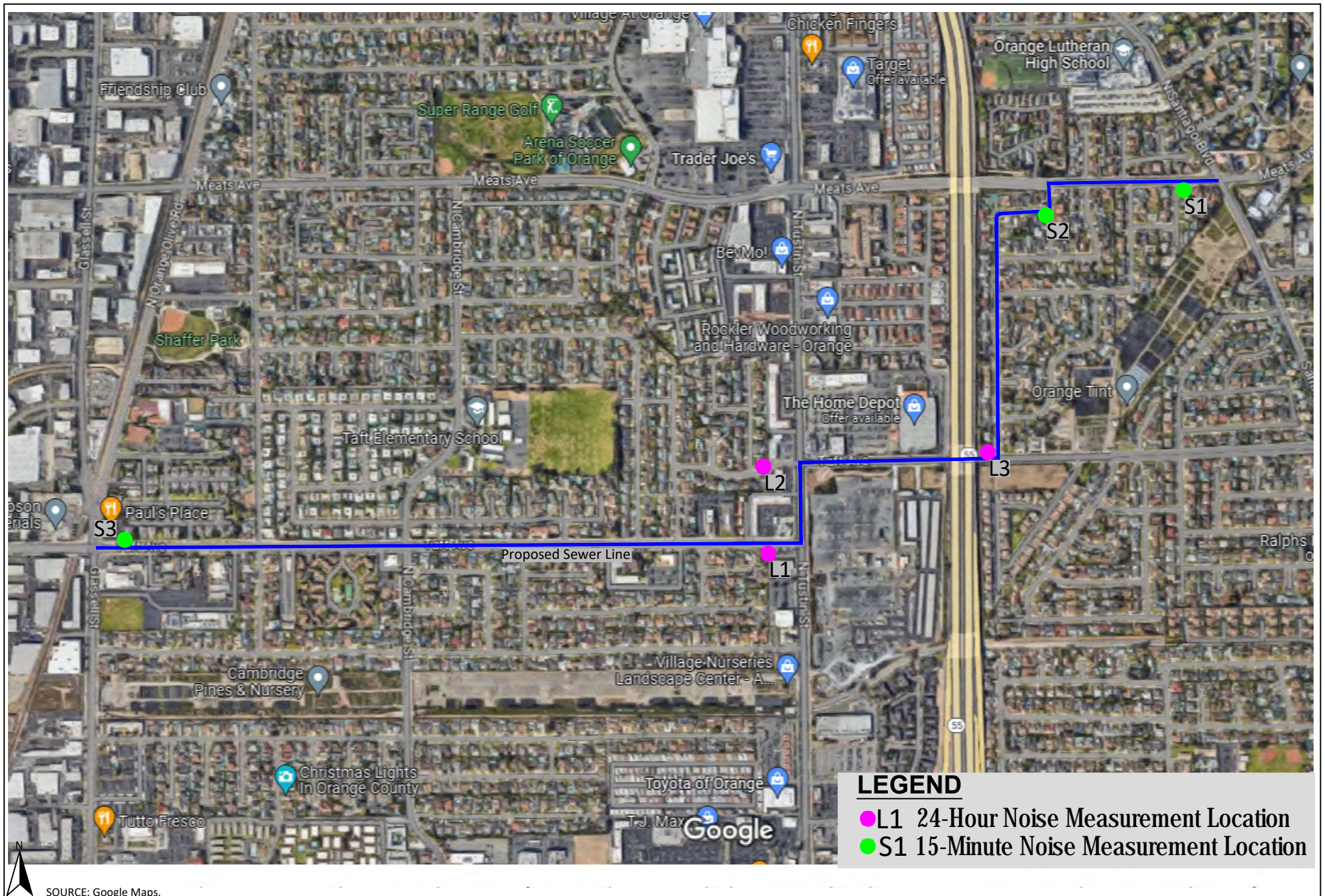
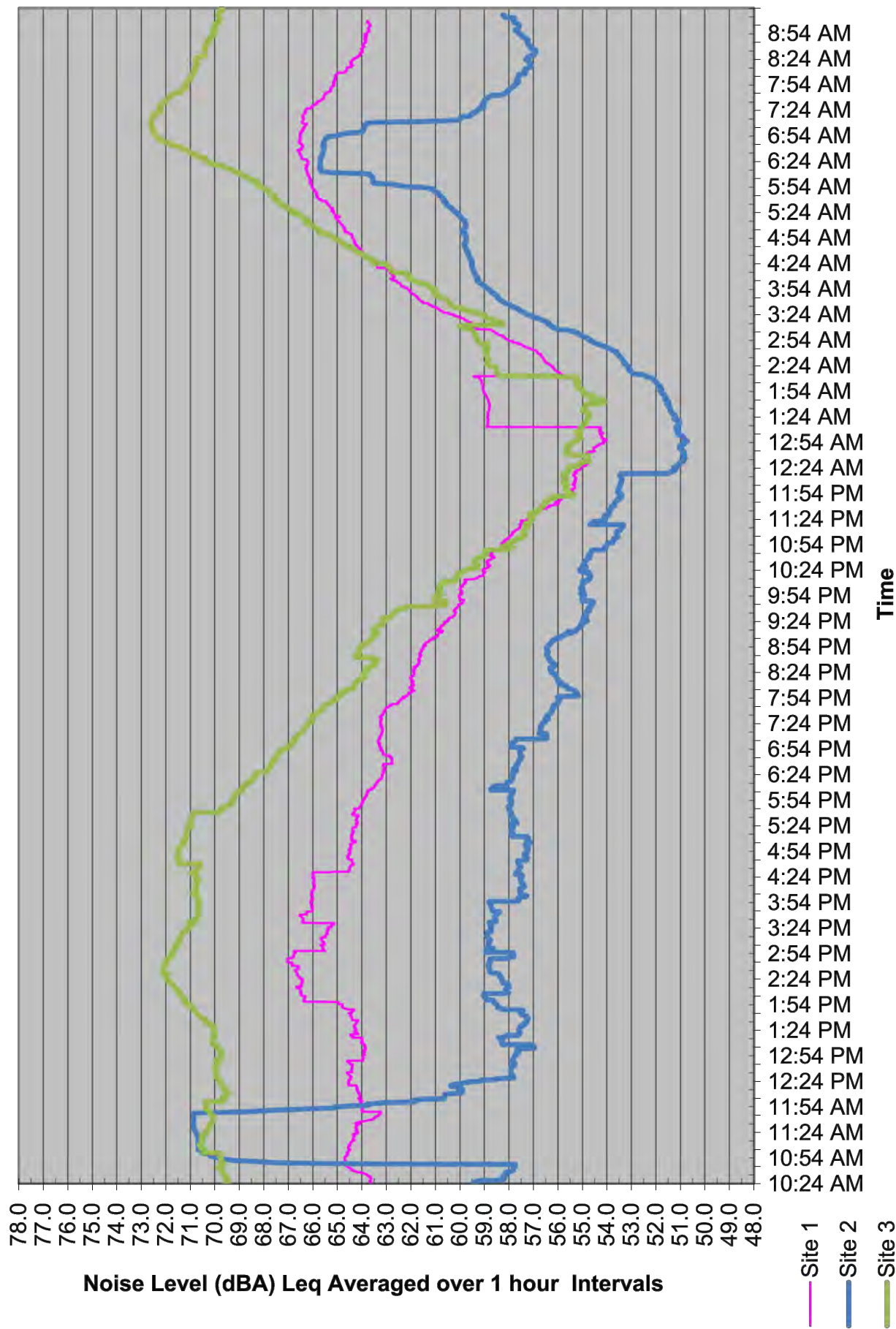


Figure 2
Field Noise Measurements Locations



SOURCE: Larson Davis LXT Type 1 Sound Level Meters.



Figure 3
24-Hour Field Noise Measurements Graph

6.0 MODELING PARAMETERS AND ASSUMPTIONS

6.1 Construction Noise

The noise impacts from construction of the proposed project have been analyzed through use of the FHWA's Roadway Construction Noise Model (RCNM). The FHWA compiled noise measurement data regarding the noise generating characteristics of several different types of construction equipment used during the Central Artery/Tunnel project in Boston. Table H below provides a list of the construction equipment anticipated to be used during construction of the proposed project.

Table H – Construction Equipment Noise Emissions and Usage Factors

Equipment Description	Number of Equipment	Acoustical Use Factor ¹ (percent)	Spec 721.560 Lmax at 50 feet ² (dBA, slow ³)	Actual Measured Lmax at 50 feet ⁴ (dBA, slow ³)
Backhoe	1	40	80	78
Front End Loader	1	40	80	79
Excavators	1	40	85	81
Crane	1	16	85	81
Drill Rig	1	20	84	79
Utility Truck	1	40	84	74
Water Truck	1	40	84	74
Welder	1	40	73	74
Air Compressor	1	40	80	78
Pump	1	50	77	81
Pickup Truck	2	40	55	75
Dump Truck	2	40	84	76
Concrete/Industrial Saw	1	20	90	83
Pavement Breaker	1	20	90	90
Sweeper	1	10	80	82
Generator	1	50	82	81
Paver	2	50	85	77

Notes:

¹ Acoustical use factor is the percentage of time each piece of equipment is operational during a typical workday.

² Spec 721.560 is the equipment noise level utilized by the RCNM program.

³ The "slow" response averages sound levels over 1-second increments. A "fast" response averages sound levels over 0.125-second increments.

⁴ Actual Measured is the average noise level measured of each piece of equipment during the Central Artery/Tunnel project in Boston, Massachusetts primarily during the 1990s.

Source: Federal Highway Administration, 2006 and CalEEMod default equipment mix.

Table H also shows the associated measured noise emissions for each piece of equipment from the RCNM model and measured percentage of typical equipment use per day. Construction noise impacts to the nearby sensitive receptors have been calculated according to the equipment noise levels and usage factors listed in Table H and through use of the RCNM. For each phase of construction, the two noisiest pieces of construction equipment were analyzed based on being placed in the middle of the road, which is based on the analysis methodology detailed in FTA Manual for a General Assessment. As shown in Table H, the two noisiest pieces of equipment would be Concrete/Industrial Saw and Pavement Breaker that would operate in the street right of way. From Table H, the two noisiest pieces of equipment that would be operated in the staging area would be a dump truck and a generator.

The nearest homes to Tustin Street are located behind a row of commercial buildings. According to the TeNS (Caltrans, 2013), the row of commercial buildings would provide 5 dB of noise shielding, which was added to the RCNM model for the receivers located in the vicinity of Tustin Street. In addition, there is an existing 6-foot high cmu wall between the proposed SCE Staging Area on the east side of State Route 55 at the nearest homes to the south. In order to account for the 6-foot cmu wall, 5 dB of shielding was added to the RCNM model.

6.2 Vibration

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of the construction site respond to these vibrations with varying results ranging from no perceptible effects at the low levels to slight damage at the highest levels. Table I gives approximate vibration levels for particular construction activities. The data in Table I provides a reasonable estimate for a wide range of soil conditions.

Table I – Vibration Source Levels for Construction Equipment

Equipment	Peak Particle Velocity (inches/second)	Approximate Vibration Level (L_v) at 25 feet
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

Source: Federal Transit Administration, 2018.

The construction-related vibration impacts have been calculated through the vibration levels shown above in Table I and through typical vibration propagation rates. The equipment assumptions were based on the equipment lists provided above in Table H.

7.0 IMPACT ANALYSIS

7.1 CEQA Thresholds of Significance

Consistent with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a significant impact related to noise would occur if a proposed project is determined to result in:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Generation of excessive groundborne vibration or groundborne noise levels; or
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

7.2 Generation of Noise Levels in Excess of Standards

The proposed project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. The following section calculates the potential noise emissions associated with the temporary construction activities and long-term operations of the proposed project and compares the noise levels to the City standards.

Construction-Related Noise

The construction activities for the proposed project are anticipated to include: (1) Mobilization/Utility Potholing; (2) Trenching/Pipeline/Maintenance Hole Installation; (3) Final Paving/Restoration; and (4) Demobilization. Noise impacts from construction activities associated with the proposed project would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities.

The nearest sensitive receptors to the project site are homes located on both sides of Meats Avenue, Breckenridge Street, Sacramento Street, and on Taft Avenue west of Tustin Street. In addition, there are over a dozen schools and/or faith-based facilities located within one quarter mile of the project site and adjacent to Taft Avenue. However, it should be noted that none of the schools or faith based facilities are located closer than the nearest homes for each analyzed pipeline segment. As such, this analysis has focused on the impacts to the nearest homes.

Since the City provides different noise standards for the pipeline construction activities undertaken within a street right of way and at the proposed staging area on the SCE property, the pipeline construction activities and staging area activities have been analyzed separately below.

Construction Activities within Street Right of Ways

Section 8.24.050(K) of the Municipal Code exempts all maintenance and construction activity undertaken by a public agency within street right of way. The City does not provide any limits to the noise levels that may be created from construction activities that are exempt and even with adherence to the City standards, the resultant construction noise levels may result in a significant substantial temporary noise increase to the nearby sensitive receptors.

In order to determine if the proposed construction activities would create a significant substantial temporary noise increase, the FTA construction noise criteria thresholds detailed above in Section 4.1 have been utilized, which shows that a significant construction noise impact would occur if construction noise exceeds 90 dBA Leq during the daytime or 80 dBA Leq during the nighttime at any of the nearby sensitive receptors.

Construction noise impacts that occur within the street right of ways to the nearby homes have been calculated through use of the RCNM and the parameters and assumptions detailed in Section 6.1. The results are shown below in Table J and the RCNM printouts are provided in Appendix C.

Table J – Construction Noise Levels Within Street Right of Ways at the Nearby Homes

Pipeline Segment No. - Location - Length (LF)	Time of Construction	Distance to Nearest Home (feet)	Construction Noise Level (dBA Leq)	FTA Construction Noise Standard ¹ / Exceed?
1 - Taft Ave (west)/ Glassell – 1,150	Daytime	65	73	90/No
2 - Taft Ave (west)/ Cambridge St – 1,450	Daytime	60	83	90/No
3 - Taft Ave/Tustin St – 2,500	Daytime	55	84	90/No
4 – Tustin St – 500	Nighttime	220	67	80/No
5 – Taft Ave (east) – 1,400	Daytime	50	85	90/No
6 – Sacramento St – 2,300	Daytime	50	85	90/No
7 – Meats Ave – 1,400	Daytime	50	85	90/No

Notes:

¹ The FTA construction noise standards are shown above in Table B.

Source: RCNM, Federal Highway Administration, 2006 (See Appendix C)

Table J shows that greatest construction noise impacts would be as high as 85 dBA Leq at the pipeline Segments 5, 6, and 7 where construction would occur during the daytime and would be as high as 67 dBA Leq at pipeline Segment 4, where construction would occur during the nighttime. All calculated construction noise levels shown in Table J are within the FTA construction noise standards of 90 dBA Leq during the daytime and 80 dBA Leq during the nighttime. Therefore, with implementation of PDF-NOI-1 and MM-NOI-1 from the Facilities Master Plan PEIR, the proposed project's construction activities that will occur with street right of ways would not exceed any standards established in the General Plan or Noise Ordinance nor would construction activities create a substantial temporary increase in ambient noise levels. Impacts would be less than significant.

Construction Activities Outside of Street Right of Ways

The only anticipated construction activities that would occur outside of street right of ways would be the two potential construction staging areas that would be located in vacant land owned by SCE on Taft Avenue, which is anticipated to be utilized during the proposed nighttime construction work on Tustin Street. There may be other construction staging areas utilized during construction of the proposed project, however all other potential construction staging areas would only be utilized during the daytime when construction noise is exempt from the City noise standards.

Section 8.24.050(E) of the Municipal Code exempts construction noise from the City noise standards that occurs between 7:00 a.m. and 8:00 p.m. Monday through Saturday and between 9:00 a.m. and 8:00 p.m. on Sundays and holidays. For the construction activities that occur outside of those hours, construction

noise is limited to the exterior noise standards provided in Section 8.24.040 of the Municipal Code that limits the nighttime noise level to 50 dBA Leq and 65 dBA Lmax, or ambient noise level (up to 70 dBA), whichever is higher.

Construction noise impacts from the two proposed SCE staging areas to the nearby homes have been calculated through use of the RCNM and the parameters and assumptions detailed in Section 6.1. The results are shown below in Table K and the RCNM printouts are provided in Appendix D.

Table K – Construction Noise Levels from SCE Staging Areas at the Nearby Homes

Construction Staging Area Location on Taft Ave	Distance to Nearest Home¹ (feet)	Construction Noise Level (dBA Leq)	Nighttime Ambient Noise Level² (dBA Leq)	City Nighttime Noise Standard³/ Exceed?
West Side of SR-55	380	61	64.0	64/No
East Side of SR-55	100	68	64.0	64/Yes

Notes:

¹ The distance to nearest home is based on the distance from center of staging area to nearest home

² The nighttime noise level is from Table F above.

³ The City nighttime noise standards are from Section 8.24.040(C) that limits nighttime noise and the nearby homes to ambient noise level.

Source: RCNM, Federal Highway Administration, 2006 (See Appendix D)

Table K shows that greatest construction noise impact would occur at the nearest homes to the proposed staging area on the east side of SR-55 with a noise level as high as 68 dBA Leq, which would exceed the City's residential nighttime noise standard of 64 dBA from Section 8.24.040 of the Municipal Code and is based on the nighttime ambient noise level, since the nighttime ambient noise level exceeds the nighttime hourly noise standard of 50 dBA Leq. This would be considered a significant impact.

Mitigation Measure Project-MM-NOI-1 is provided that if the SCE Staging Area on the east side of State Route 55 is utilized that all activities within this staging area shall be limited to when construction activities are exempt from the City noise standards as detailed in Section 8.24.050(E) of the City of Orange Municipal Code. With implementation of Mitigation Measure Project-MM-NOI-1, the staging area noise levels would not exceed any standards established in the General Plan or Noise Ordinance nor would construction activities create a substantial temporary increase in ambient noise levels. Impacts would be less than significant with implementation of Mitigation Measure Project-MM-NOI-1.

Operational-Related Noise

The pipeline and maintenance holes would not be associated with additional OC San O&M activities above what is currently occurring with the existing pipelines to be replaced/relocated. Project O&M activities would include inspection and repair, as necessary, of pipeline and maintenance holes. It is anticipated that all operational activities would occur within street right of ways. Section 8.24.050(K) of the Municipal Code exempts all maintenance and construction activity undertaken by a public agency within street right of way. In addition, all operational maintenance activities would be less intensive than the proposed pipeline construction activities, which was found above to create a less than significant noise impact. Therefore, operational onsite noise impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Project-Specific Mitigation

Project-MM-NOI-1

If the SCE Staging Area located on the east side of State Route 55 is utilized as part of the proposed project, all activities within this Staging Area shall be limited to when construction activities are exempt from the City noise standards as detailed in Section 8.24.050(E) of the City of Orange Municipal Code. No time of day restrictions are placed on the SCE Staging Area located on the west side of State Route 55.

Level of Significance After Mitigation

Less than significant impact.

7.3 Generation of Excessive Groundborne Vibration

The proposed project would not expose persons to or generation of excessive groundborne vibration or groundborne noise levels. The following section analyzes the potential vibration impacts associated with the construction and operations of the proposed project.

Construction-Related Vibration Impacts

The construction activities for the proposed project are anticipated to include: (1) Mobilization/Utility Potholing; (2) Trenching/Pipeline/Maintenance Hole Installation; (3) Final Paving/Restoration; and (4) Demobilization. Vibration impacts from construction activities associated with the proposed project would typically be created from the operation of heavy off-road equipment. The nearest sensitive receptors to the project site are homes located on both sides of Meats Avenue, Breckenridge Street, Sacramento Street, and on Taft Avenue west of Tustin Street. There is a potential that off-road equipment would operate as near as 50 feet from residential structures.

Section 5.10.3 of the *City of Orange General Plan Program EIR* (General Plan EIR), March 2010, determined that a significant vibration impact would occur if vibration levels would exceed 0.2 inch per second PPV at any nearby building. In addition, the Facilities Master Plan PEIR details that annoyance to people in homes starts at approximately 75 VdB.

The primary source of vibration during construction would be from the operation of a pavement breaker (hoe ram). From Table I above a pavement breaker would create a vibration level of 0.089 inch per second PPV at 25 feet or 87 VdB at 25 feet. Based on typical propagation rates, the vibration level at the nearest residential structure (50 feet away) would be 0.04 inch per second PPV or 81 VdB. The vibration level at the nearest residential structure would be below the 0.2 inch per second PPV threshold from the General Plan EIR. Although, vibration activities would exceed the 75 VdB level where vibration starts to annoy people in homes, the Facilities Master Plan PEIR found that since the pipeline construction activities do not remain at any one location for long periods of time (i.e., less than a day in any location), since vibration levels diminish rapidly over short distances, and through adherence to PDF-NOI-1 that the contractor has the responsibility to notify the neighbors prior to the start of construction and respond to any complaints during construction, the human response to vibration would not be considered a significant impact. Impacts would be less than significant.

Operations-Related Vibration Impacts

The pipeline and maintenance holes would not be associated with additional OC San O&M activities above what is currently occurring with the existing pipelines to be replaced/relocated. Project O&M activities

would include inspection and repair, as necessary, of pipeline and maintenance holes. In addition, all operational maintenance activities would be less intensive than the proposed pipeline construction activities, which was found above to create a less than significant vibration impact. Therefore, a less than significant vibration impact is anticipated from the operation of the proposed project.

Level of Significance

Less than significant impact.

7.4 Aircraft Noise

The proposed project would not expose people residing or working in the project area to excessive noise levels from aircraft. The nearest airport is John Wayne Airport that is located approximately nine miles south of the project site. The project site is located outside of the 60 dBA CNEL noise contours of John Wayne Airport. No impacts would occur from aircraft noise.

Level of Significance

No impact.

8.0 REFERENCES

California Department of Transportation, *2020 Annual Average Daily Truck Traffic on the California State Highway System*, 2022.

California Department of Transportation (Caltrans), *Technical Noise Supplement to the Traffic Noise Analytics Protocol*, September 2013.

California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, April 2020.

California Natural Resources Agency, 2022 California Environmental Quality Act (CEQA) Statute and Guidelines, Association of Environmental Professionals, 2022.

City of Orange, *City of Orange General Plan*, March 9, 2010.

City of Orange, *Orange General Plan Program Environmental Impact Report*, March, 2010.

City of Orange, *Orange California Code of Ordinances Chapter 8.24 – Noise Control*, August 12, 2014.

Dudek, *Draft Orange County Sanitation District Facilities Master Plan Program Environmental Impact Report*, September 2020.

Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, September 2018.

U.S. Department of Transportation, *FHWA Roadway Construction Noise Model User's Guide*, January, 2006.

APPENDIX A

Field Noise Measurements Photo Index



Noise Measurement Site S1 - looking north



Noise Measurement Site S1 - looking northeast



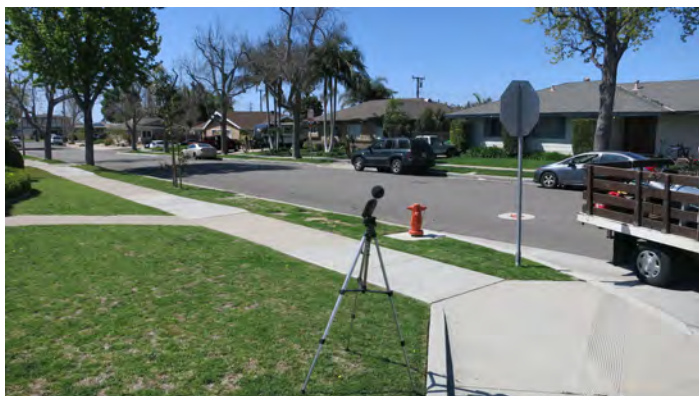
Noise Measurement Site S1 - looking east



Noise Measurement Site S1 - looking southeast



Noise Measurement Site S1 - looking south



Noise Measurement Site S1 - looking southwest



Noise Measurement Site S1 - looking west



Noise Measurement Site S1 - looking northwest



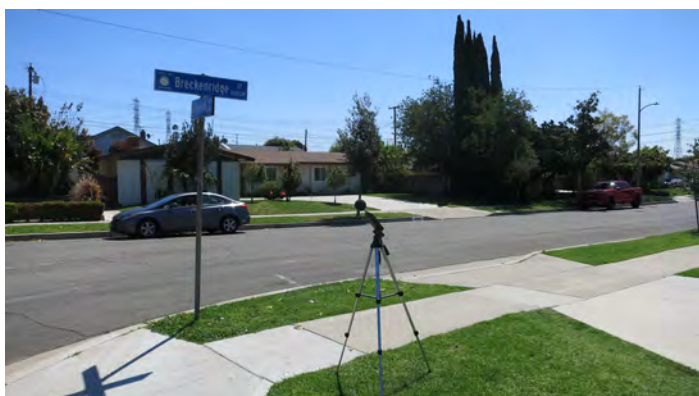
Noise Measurement Site S2 - looking north



Noise Measurement Site S2 - looking northeast



Noise Measurement Site S2 - looking east



Noise Measurement Site S2 - looking southeast



Noise Measurement Site S2 - looking south



Noise Measurement Site S2 - looking southwest



Noise Measurement Site S2 - looking west



Noise Measurement Site S2 - looking northwest



Noise Measurement Site S3 - looking north



Noise Measurement Site S3 - looking northeast



Noise Measurement Site S3 - looking east



Noise Measurement Site S3 - looking southeast



Noise Measurement Site S3 - looking south



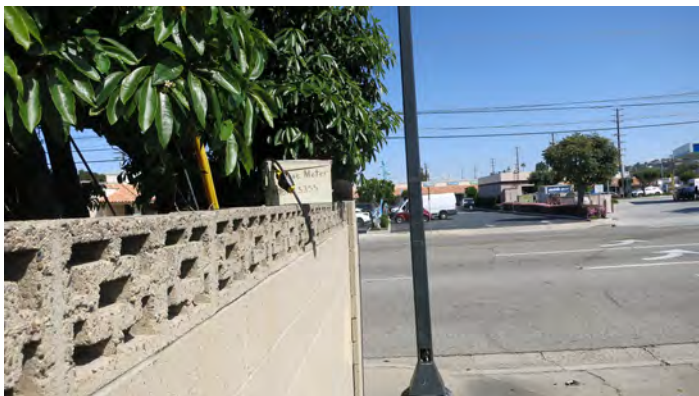
Noise Measurement Site S3 - looking west



Noise Measurement Site S3 - looking northwest



Noise Measurement Site S3 - looking northeast



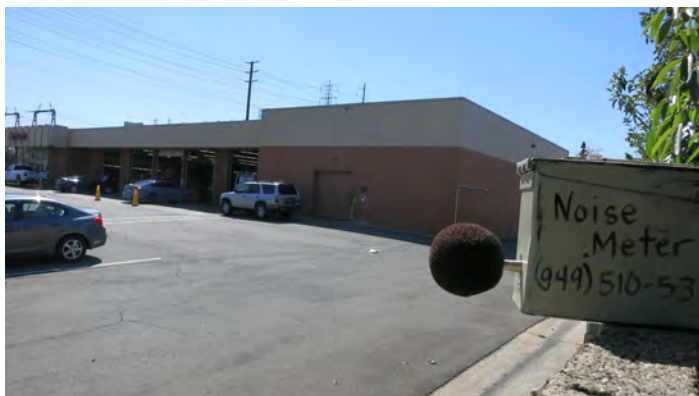
Noise Measurement Site L1 - looking north



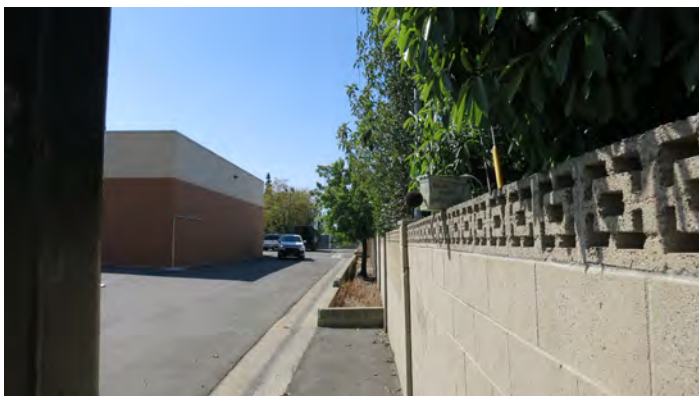
Noise Measurement Site L1 - looking northeast



Noise Measurement Site L1 - looking east



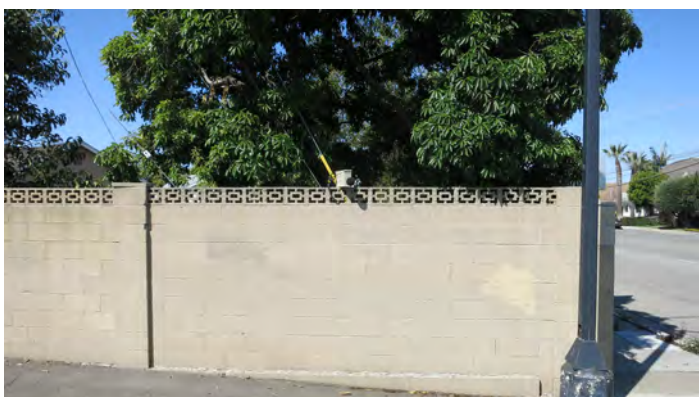
Noise Measurement Site L1 - looking southeast



Noise Measurement Site L1 - looking south



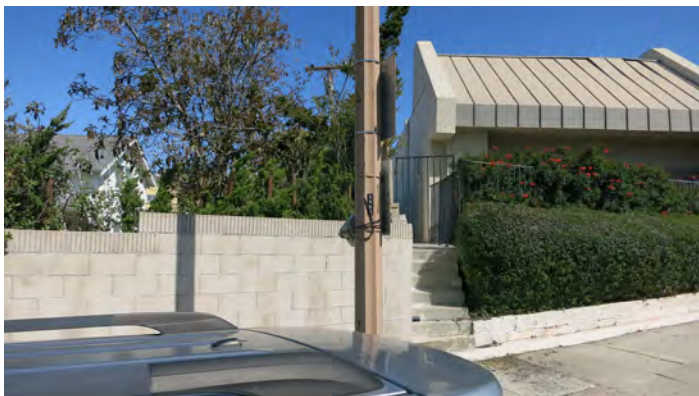
Noise Measurement Site L1 - looking southwest



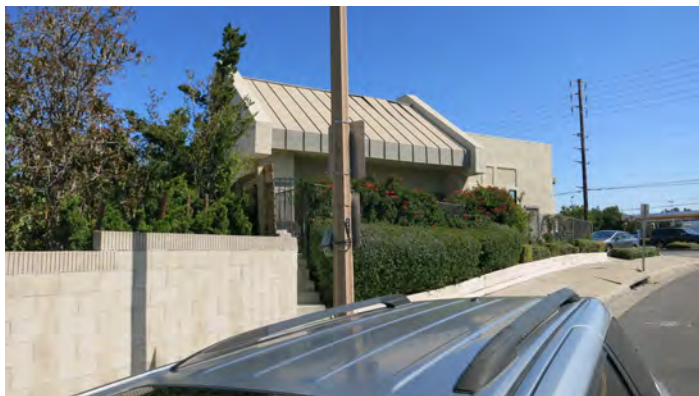
Noise Measurement Site L1 - looking west



Noise Measurement Site L1 - looking northwest



Noise Measurement Site L2 - looking north



Noise Measurement Site L2 - looking northeast



Noise Measurement Site L2 - looking east



Noise Measurement Site L2 - looking southeast



Noise Measurement Site L2 - looking south



Noise Measurement Site L2 - looking southwest



Noise Measurement Site L2 - looking west



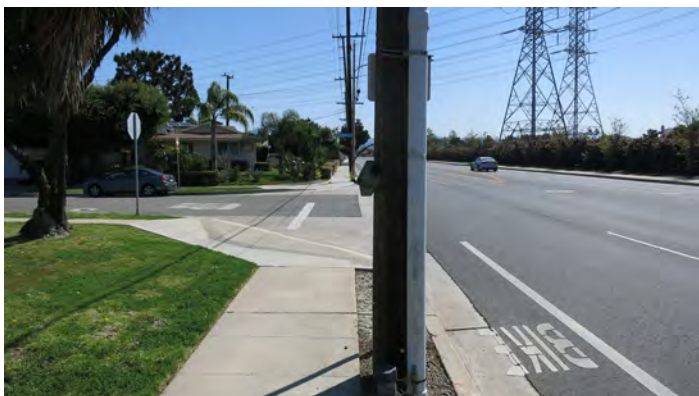
Noise Measurement Site L2 - looking northwest



Noise Measurement Site L3 - looking north



Noise Measurement Site L3 - looking northeast



Noise Measurement Site L3 - looking east



Noise Measurement Site L3 - looking southeast



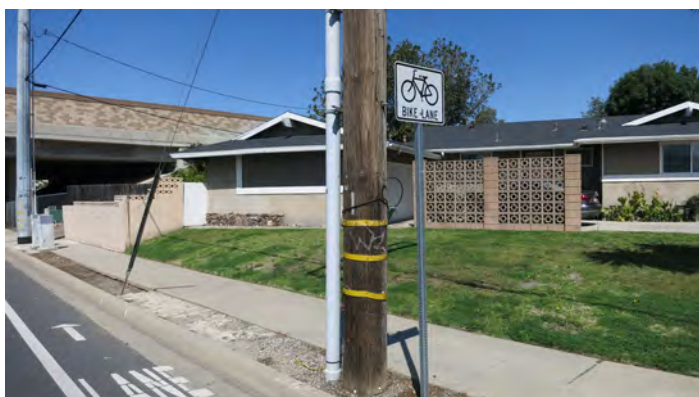
Noise Measurement Site L3 - looking south



Noise Measurement Site L3 - looking southwest



Noise Measurement Site L3 - looking west



Noise Measurement Site L3 - looking northwest

APPENDIX B

Field Noise Measurements Printouts

Site 1 - On Wall South of Taft Ave (West) west side of Firestone
April 4, 2023 9:37:47 AM Leq Daytime = 64.3
Sampling Time = 1 sec Freq Weighting=A Leq Nighttime = 62.0
Record Num = 86402 CNEL(24hr)= 69.0
Leq = 63.6 Ldn(24hr)= 68.8
Min = 44.8 Min Leq hr at 12:55 AM 54.0
Max = 92.2 Max Leq hr at 2:42 PM 67.0

Site 1 - On Wall South of Taft Ave (West) west side of Firestone

SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
66.5	9:37:47	66.5	66.5
63.5	9:37:48	63.5	63.5
61.3	9:37:49	61.3	61.3
60.1	9:37:50	60.1	60.1
61.0	9:37:51	61.0	61.0
59.9	9:37:52	59.9	59.9
70.7	9:37:53	70.7	70.7
76.9	9:37:54	76.9	76.9
73.4	9:37:55	73.4	73.4
70.8	9:37:56	70.8	70.8
66.8	9:37:57	66.8	66.8
69.9	9:37:58	69.9	69.9
72.3	9:37:59	72.3	72.3
68.1	9:38:00	68.1	68.1
64.2	9:38:01	64.2	64.2
62.0	9:38:02	62.0	62.0
65.5	9:38:03	65.5	65.5
65.6	9:38:04	65.6	65.6
63.3	9:38:05	63.3	63.3
71.9	9:38:06	71.9	71.9
73.7	9:38:07	73.7	73.7
70.7	9:38:08	70.7	70.7
67.5	9:38:09	67.5	67.5
67.4	9:38:10	67.4	67.4
65.7	9:38:11	65.7	65.7
66.1	9:38:12	66.1	66.1
65.4	9:38:13	65.4	65.4
64.2	9:38:14	64.2	64.2
64.6	9:38:15	64.6	64.6
65.5	9:38:16	65.5	65.5
62.8	9:38:17	62.8	62.8
60.4	9:38:18	60.4	60.4
59.4	9:38:19	59.4	59.4
59.9	9:38:20	59.9	59.9
61.5	9:38:21	61.5	61.5
64.5	9:38:22	64.5	64.5
64.9	9:38:23	64.9	64.9
63.9	9:38:24	63.9	63.9
62.6	9:38:25	62.6	62.6
61.6	9:38:26	61.6	61.6
62.5	9:38:27	62.5	62.5
64.7	9:38:28	64.7	64.7
65.6	9:38:29	65.6	65.6
66.9	9:38:30	66.9	66.9
70.2	9:38:31	70.2	70.2
68.1	9:38:32	68.1	68.1
69.7	9:38:33	69.7	69.7
71.8	9:38:34	71.8	71.8
68.5	9:38:35	68.5	68.5
66.1	9:38:36	66.1	66.1
66.5	9:38:37	66.5	66.5
69.0	9:38:38	69.0	69.0
67.6	9:38:39	67.6	67.6
68.6	9:38:40	68.6	68.6
69.7	9:38:41	69.7	69.7
68.4	9:38:42	68.4	68.4
70.9	9:38:43	70.9	70.9
69.6	9:38:44	69.6	69.6
68.1	9:38:45	68.1	68.1
67.8	9:38:46	67.8	67.8
67.4	9:38:47	67.4	67.4
66.7	9:38:48	66.7	66.7
66.1	9:38:49	66.1	66.1
69.8	9:38:50	69.8	69.8
68.6	9:38:51	68.6	68.6
67.2	9:38:52	67.2	67.2
68.5	9:38:53	68.5	68.5
64.8	9:38:54	64.8	64.8
67.2	9:38:55	67.2	67.2
67.1	9:38:56	67.1	67.1
66.4	9:38:57	66.4	66.4
64.9	9:38:58	64.9	64.9
67.6	9:38:59	67.6	67.6
66.3	9:39:00	66.3	66.3
64.1	9:39:01	64.1	64.1
63.8	9:39:02	63.8	63.8
65.0	9:39:03	65.0	65.0
65.1	9:39:04	65.1	65.1
65.7	9:39:05	65.7	65.7
66.5	9:39:06	66.5	66.5
69.8	9:39:07	69.8	69.8
72.0	9:39:08	72.0	72.0
70.2	9:39:09	70.2	70.2
68.3	9:39:10	68.3	68.3
67.0	9:39:11	67.0	67.0
67.3	9:39:12	67.3	67.3
65.4	9:39:13	65.4	65.4
63.2	9:39:14	63.2	63.2
60.0	9:39:15	60.0	60.0
57.8	9:39:16	57.8	57.8
57.4	9:39:17	57.4	57.4
58.6	9:39:18	58.6	58.6
59.0	9:39:19	59.0	59.0
59.2	9:39:20	59.2	59.2
58.7	9:39:21	58.7	58.7
57.4	9:39:22	57.4	57.4
57.4	9:39:23	57.4	57.4
57.2	9:39:24	57.2	57.2
57.5	9:39:25	57.5	57.5
58.1	9:39:26	58.1	58.1
56.7	9:39:27	56.7	56.7
56.2	9:39:28	56.2	56.2
57.2	9:39:29	57.2	57.2
56.4	9:39:30	56.4	56.4
55.3	9:39:31	55.3	55.3
54.8	9:39:32	54.8	54.8
54.0	9:39:33	54.0	54.0
62.0	9:39:34	62.0	62.0
59.0	9:39:35	59.0	59.0
57.1	9:39:36	57.1	57.1
57.2	9:39:37	57.2	57.2
58.0	9:39:38	58.0	58.0
57.1	9:39:39	57.1	57.1
55.1	9:39:40	55.1	55.1
52.8	9:39:41	52.8	52.8
51.9	9:39:42	51.9	51.9
51.1	9:39:43	51.1	51.1
50.6	9:39:44	50.6	50.6
50.1	9:39:45	50.1	50.1
50.1	9:39:46	50.1	50.1
50.7	9:39:47	50.7	50.7
52.3	9:39:48	52.3	52.3
52.7	9:39:49	52.7	52.7
53.1	9:39:50	53.1	53.1
53.9	9:39:51	53.9	53.9
57.4	9:39:52	57.4	57.4
57.2	9:39:53	57.2	57.2
57.4	9:39:54	57.4	57.4
60.9	9:39:55	60.9	60.9
62.8	9:39:56	62.8	62.8
62.8	9:39:57	62.8	62.8
61.7	9:39:58	61.7	61.7
59.6	9:39:59	59.6	59.6
57.9	9:40:00	57.9	57.9
59.0	9:40:01	59.0	59.0
60.4	9:40:02	60.4	60.4
61.3	9:40:03	61.3	61.3
63.8	9:40:04	63.8	63.8
62.9	9:40:05	62.9	62.9
60.8	9:40:06	60.8	60.8
59.2	9:40:07	59.2	59.2
59.4	9:40:08	59.4	59.4
60.5	9:40:09	60.5	60.5
65.8	9:40:10	65.8	65.8
65.4	9:40:11	65.4	65.4
63.3	9:40:12	63.3	63.3
60.9	9:40:13	60.9	60.9
58.5	9:40:14	58.5	58.5
59.9	9:40:15	59.9	59.9
60.8	9:40:16	60.8	60.8
65.2	9:40:17	65.2	65.2
66.4	9:40:18	66.4	66.4
67.1	9:40:19	67.1	67.1
66.5	9:40:20	66.5	66.5
64.9	9:40:21	64.9	64.9
63.1	9:40:22	63.1	63.1
62.2	9:40:23	62.2	62.2
61.0	9:40:24	61.0	61.0
60.0	9:40:25	60.0	60.0
59.7	9:40:26	59.7	59.7
60.0	9:40:27	60.0	60.0
62.5	9:40:28	62.5	62.5
61.4	9:40:29	61.4	61.4
59.8	9:40:30	59.8	59.8

Site 2 - On Street Light North Side of Briardale Ave
April 4, 2023 9:46:29 AM Leq Daytime = 61.4
Sampling Time = 1 sec Freq Weighting=A Leq Nighttime = 59.1
Record Num = 86402 CNEL(24hr)= 66.0
Leq = 60.7 Ldn(24hr)= 65.9
Min = 42.7 Min Leq hr at 12:55 AM 50.7
Max = 85.7 Max Leq hr at 11:28 AM 70.9

Site 2 - On Street Light North Side of Briardale Ave

SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
75.1	9:46:29	75.1	75.1
70.9	9:46:30	70.9	70.9
66.9	9:46:31	66.9	66.9
63.5	9:46:32	63.5	63.5
61.8	9:46:33	61.8	61.8
60.8	9:46:34	60.8	60.8
67.2	9:46:35	67.2	67.2
74.2	9:46:36	74.2	74.2
73.2	9:46:37	73.2	73.2
69.7	9:46:38	69.7	69.7
66.2	9:46:39	66.2	66.2
63.1	9:46:40	63.1	63.1
63.3	9:46:41	63.3	63.3
62.9	9:46:42	62.9	62.9
60.9	9:46:43	60.9	60.9
60.6	9:46:44	60.6	60.6
58.9	9:46:45	58.9	58.9
56.6	9:46:46	56.6	56.6
57.6	9:46:47	57.6	57.6
58.5	9:46:48	58.5	58.5
57.1	9:46:49	57.1	57.1
58.6	9:46:50	58.6	58.6
65.0	9:46:51	65.0	65.0
64.4	9:46:52	64.4	64.4
62.8	9:46:53	62.8	62.8
61.0	9:46:54	61.0	61.0
61.9	9:46:55	61.9	61.9
63.6	9:46:56	63.6	63.6
62.5	9:46:57	62.5	62.5
62.7	9:46:58	62.7	62.7
62.1	9:46:59	62.1	62.1
62.4	9:47:00	62.4	62.4
63.3	9:47:01	63.3	63.3
64.4	9:47:02	64.4	64.4
63.8	9:47:03	63.8	63.8
69.8	9:47:04	69.8	69.8
69.0	9:47:05	69.0	69.0
64.9	9:47:06	64.9	64.9
61.2	9:47:07	61.2	61.2
61.2	9:47:08	61.2	61.2
62.7	9:47:09	62.7	62.7
59.7	9:47:10	59.7	59.7
70.7	9:47:11	70.7	70.7
69.4	9:47:12	69.4	69.4
65.3	9:47:13	65.3	65.3
61.5	9:47:14	61.5	61.5
58.5	9:47:15	58.5	58.5
60.0	9:47:16	60.0	60.0
66.2	9:47:17	66.2	66.2
65.1	9:47:18	65.1	65.1
69.6	9:47:19	69.6	69.6
65.6	9:47:20	65.6	65.6
61.7	9:47:21	61.7	61.7
59.2	9:47:22	59.2	59.2
57.8	9:47:23	57.8	57.8
68.2	9:47:24	68.2	68.2
64.3	9:47:25	64.3	64.3
62.9	9:47:26	62.9	62.9
59.6	9:47:27	59.6	59.6
58.8	9:47:28	58.8	58.8
56.5	9:47:29	56.5	56.5
68.1	9:47:30	68.1	68.1
66.0	9:47:31	66.0	66.0
63.5	9:47:32	63.5	63.5
60.4	9:47:33	60.4	60.4
58.5	9:47:34	58.5	58.5
59.9	9:47:35	59.9	59.9
58.0	9:47:36	58.0	58.0
64.8	9:47:37	64.8	64.8
63.9	9:47:38	63.9	63.9
61.7	9:47:39	61.7	61.7
59.7	9:47:40	59.7	59.7
62.0	9:47:41	62.0	62.0
61.8	9:47:42	61.8	61.8
60.8	9:47:43	60.8	60.8
63.9	9:47:44	63.9	63.9
63.2	9:47:45	63.2	63.2
60.4	9:47:46	60.4	60.4
58.3	9:47:47	58.3	58.3
56.7	9:47:48	56.7	56.7
55.8	9:47:49	55.8	55.8
55.7	9:47:50	55.7	55.7
54.4	9:47:51	54.4	54.4
68.2	9:47:52	68.2	68.2
73.3	9:47:53	73.3	73.3
69.5	9:47:54	69.5	69.5
65.9	9:47:55	65.9	65.9
65.1	9:47:56	65.1	65.1
67.9	9:47:57	67.9	67.9
77.7	9:47:58	77.7	77.7
75.5	9:47:59	75.5	75.5
74.7	9:48:00	74.7	74.7
76.3	9:48:01	76.3	76.3
74.0	9:48:02	74.0	74.0
70.2	9:48:03	70.2	70.2
66.5	9:48:04	66.5	66.5
62.9	9:48:05	62.9	62.9
65.8	9:48:06	65.8	65.8
62.4	9:48:07	62.4	62.4
59.5	9:48:08	59.5	59.5
59.6	9:48:09	59.6	59.6
62.3	9:48:10	62.3	62.3
66.2	9:48:11	66.2	66.2
65.7	9:48:12	65.7	65.7
63.1	9:48:13	63.1	63.1
60.4	9:48:14	60.4	60.4
58.0	9:48:15	58.0	58.0
56.0	9:48:16	56.0	56.0
55.1	9:48:17	55.1	55.1
55.8	9:48:18	55.8	55.8
55.9	9:48:19	55.9	55.9
56.0	9:48:20	56.0	56.0
54.4	9:48:21	54.4	54.4
55.0	9:48:22	55.0	55.0
54.6	9:48:23	54.6	54.6
54.0	9:48:24	54.0	54.0
53.3	9:48:25	53.3	53.3
52.5	9:48:26	52.5	52.5
51.4	9:48:27	51.4	51.4
50.4	9:48:28	50.4	50.4
50.9	9:48:29	50.9	50.9
51.9	9:48:30	51.9	51.9
52.7	9:48:31	52.7	52.7
54.3	9:48:32	54.3	54.3
55.0	9:48:33	55.0	55.0
55.6	9:48:34	55.6	55.6
56.7	9:48:35	56.7	56.7
58.2	9:48:36	58.2	58.2
58.8	9:48:37	58.8	58.8
57.5	9:48:38	57.5	57.5
56.2	9:48:39	56.2	56.2
56.3	9:48:40	56.3	56.3
55.8	9:48:41	55.8	55.8
54.7	9:48:42	54.7	54.7
53.8	9:48:43	53.8	53.8
53.1	9:48:44	53.1	53.1
53.1	9:48:45	53.1	53.1
54.2	9:48:46	54.2	54.2
54.6	9:48:47	54.6	54.6
56.8	9:48:48	56.8	56.8
57.5	9:48:49	57.5	57.5
56.4	9:48:50	56.4	56.4
55.1	9:48:51	55.1	55.1
53.5	9:48:52	53.5	53.5
52.8	9:48:53	52.8	52.8
52.4	9:48:54	52.4	52.4
52.4	9:48:55	52.4	52.4
51.6	9:48:56	51.6	51.6
51.2	9:48:57	51.2	51.2
54.6	9:48:58	54.6	54.6
56.7	9:48:59	56.7	56.7
61.3	9:49:00	61.3	61.3
63.4	9:49:01	63.4	63.4
61.6	9:49:02	61.6	61.6
59.5	9:49:03	59.5	59.5
58.6	9:49:04	58.6	58.6
58.2	9:49:05	58.2	58.2
56.6	9:49:06	56.6	56.6
55.9	9:49:07	55.9	55.9
56.9	9:49:08	56.9	56.9
57.5	9:49:09	57.5	57.5
56.8	9:49:10	56.8	56.8
55.3	9:49:11	55.3	55.3
54.9	9:49:12	54.9	54.9

Measurement Report

Report Summary

Meter's File Name	831_Data.001	Computer's File Name	SLM_0002509_831_Data_001.16.ldb
Meter	831		
Firmware	2.403		
User	GT		Location
Description	OCSD Taft Sewer		
Note	Front yard of home at 2087 Mori Ln, approx 50 ft south of Meats Ave CL & 35 ft east of Mori Ln CL		
Start Time	2023-04-04 10:06:51	Duration	0:15:00.0
End Time	2023-04-04 10:21:51	Run Time	0:15:00.0
		Pause Time	0:00:00.0

Results

Overall Metrics

LA _{eq}	63.8 dB		
LAE	93.3 dB	SEA	--- dB
EA	239.3 µPa²h		
LZ _{peak}	105.1 dB	2023-04-04 10:06:52	
LAS _{max}	74.1 dB	2023-04-04 10:09:31	
LAS _{min}	44.1 dB	2023-04-04 10:21:03	
LA _{eq}	63.8 dB		
LC _{eq}	70.7 dB	LC _{eq} - LA _{eq}	6.9 dB
LAI _{eq}	65.3 dB	LAI _{eq} - LA _{eq}	1.6 dB

Exceedances

	Count	Duration
LAS > 65.0 dB	46	0:05:26.0
LAS > 85.0 dB	0	0:00:00.0
LZ _{peak} > 135.0 dB	0	0:00:00.0
LZ _{peak} > 137.0 dB	0	0:00:00.0
LZ _{peak} > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight	
63.8 dB	63.8 dB	0.0 dB	
LDEN	LDay	LEve	LNight
63.8 dB	63.8 dB	--- dB	--- dB

Any Data

Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L _{eq}	63.8 dB		70.7 dB		73.2 dB	
LS _(max)	74.1 dB	2023-04-04 10:09:31	84.9 dB	2023-04-04 10:08:47	93.9 dB	2023-04-04 10:06:52
LF _(max)	76.9 dB	2023-04-04 10:18:08	87.7 dB	2023-04-04 10:08:26	99.7 dB	2023-04-04 10:06:52
LI _(max)	81.1 dB	2023-04-04 10:18:08	88.4 dB	2023-04-04 10:08:46	102.9 dB	2023-04-04 10:06:52
LS _(min)	44.1 dB	2023-04-04 10:21:03	58.6 dB	2023-04-04 10:21:02	63.3 dB	2023-04-04 10:21:05
LF _(min)	43.4 dB	2023-04-04 10:21:03	56.2 dB	2023-04-04 10:21:02	61.2 dB	2023-04-04 10:11:48
LI _(min)	43.8 dB	2023-04-04 10:21:02	58.9 dB	2023-04-04 10:11:48	64.5 dB	2023-04-04 10:21:05
L _{Peak(max)}	99.5 dB	2023-04-04 10:18:08	100.7 dB	2023-04-04 10:18:08	105.1 dB	2023-04-04 10:06:52

Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	68.7 dB
LAS 10.0	67.3 dB
LAS 33.3	64.2 dB
LAS 50.0	62.2 dB
LAS 66.6	59.5 dB
LAS 90.0	52.8 dB

Measurement Report

Report Summary

Meter's File Name	831_Data.002	Computer's File Name	SLM_000
Meter	831		
Firmware	2.403		
User	GT		Location
Description	OCSD Taft Sewer		
Note	Front yard of home at 2060 Breckenridge St, approx 40 ft west of Breckenridge St CL and 30 ft south of Sacramento St CL		
Start Time	2023-04-04 10:26:29	Duration	0:15:00.0
End Time	2023-04-04 10:41:29	Run Time	0:15:00.0
		Pause Time	0:00:00.0

Results

Overall Metrics

LA _{eq}	55.8 dB		
LAE	85.3 dB	SEA	--- dB
EA	37.8 µPa²h		
LZ _{peak}	100.7 dB	2023-04-04 10:28:46	
LAS _{max}	75.0 dB	2023-04-04 10:28:47	
LAS _{min}	46.3 dB	2023-04-04 10:31:53	
LA _{eq}	55.8 dB		
LC _{eq}	69.8 dB	LC _{eq} - LA _{eq}	14.1 dB
LAI _{eq}	60.2 dB	LAI _{eq} - LA _{eq}	4.4 dB

Exceedances

	Count	Duration
LAS > 65.0 dB	3	0:00:11.0
LAS > 85.0 dB	0	0:00:00.0
LZ _{peak} > 135.0 dB	0	0:00:00.0
LZ _{peak} > 137.0 dB	0	0:00:00.0
LZ _{peak} > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight	
55.8 dB	55.8 dB	0.0 dB	
LDEN	LDay	LEve	LNight
55.8 dB	55.8 dB	--- dB	--- dB

Any Data

Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L _{eq}	55.8 dB		69.8 dB		72.0 dB	
LS _(max)	75.0 dB	2023-04-04 10:28:47	92.1 dB	2023-04-04 10:28:47	92.4 dB	2023-04-04 10:28:47
LF _(max)	76.7 dB	2023-04-04 10:28:47	93.9 dB	2023-04-04 10:28:47	94.1 dB	2023-04-04 10:28:47
LI _(max)	77.3 dB	2023-04-04 10:28:47	94.5 dB	2023-04-04 10:28:47	94.7 dB	2023-04-04 10:26:29
LS _(min)	46.3 dB	2023-04-04 10:31:53	58.7 dB	2023-04-04 10:34:56	63.2 dB	2023-04-04 10:31:54
LF _(min)	45.7 dB	2023-04-04 10:31:52	57.6 dB	2023-04-04 10:31:52	61.4 dB	2023-04-04 10:31:49
LI _(min)	46.0 dB	2023-04-04 10:31:52	59.5 dB	2023-04-04 10:34:56	64.4 dB	2023-04-04 10:31:54
L _{Peak(max)}	87.2 dB	2023-04-04 10:39:19	100.2 dB	2023-04-04 10:28:46	100.7 dB	2023-04-04 10:28:46

Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	60.2 dB
LAS 10.0	56.8 dB
LAS 33.3	53.1 dB
LAS 50.0	51.6 dB
LAS 66.6	50.4 dB
LAS 90.0	48.5 dB

Measurement Report

Report Summary

Meter's File Name	831_Data.003	Computer's File Name	SLM_0002509_831_Data_003.09
Meter	831		
Firmware	2.403		
User	GT		Location
Description	OCSD Taft Sewer		
Note	Front yard of home at 131 Taft Ave, approx 50 ft north of Taft Ave CL and 240 ft east of Glassell St CL		
Start Time	2023-04-04 10:48:28	Duration	0:15:00.0
End Time	2023-04-04 11:03:28	Run Time	0:15:00.0
		Pause Time	0:00:00.0

Results

Overall Metrics

LA _{eq}	62.4 dB		
LAE	92.0 dB	SEA	--- dB
EA	175.1 µPa²h		
LZ _{peak}	101.5 dB	2023-04-04 10:48:28	
LAS _{max}	75.3 dB	2023-04-04 10:50:46	
LAS _{min}	48.0 dB	2023-04-04 10:56:24	
LA _{eq}	62.4 dB		
LC _{eq}	72.7 dB	LC _{eq} - LA _{eq}	10.2 dB
LAI _{eq}	65.1 dB	LAI _{eq} - LA _{eq}	2.7 dB

Exceedances

Count

Duration

LAS > 65.0 dB	20	0:03:05.4
LAS > 85.0 dB	0	0:00:00.0
LZ _{peak} > 135.0 dB	0	0:00:00.0
LZ _{peak} > 137.0 dB	0	0:00:00.0
LZ _{peak} > 140.0 dB	0	0:00:00.0

Community Noise

LDN

LDay

LNight

62.4 dB

62.4 dB

0.0 dB

LDEN

LDay

LEve

LNight

62.4 dB

62.4 dB

--- dB

--- dB

Any Data

A

C

Z

	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L _{eq}	62.4 dB		72.7 dB		74.5 dB	
LS _(max)	75.3 dB	2023-04-04 10:50:46	89.3 dB	2023-04-04 10:52:48	92.5 dB	2023-04-04 10:48:28
LF _(max)	80.6 dB	2023-04-04 10:50:43	92.9 dB	2023-04-04 10:52:48	96.3 dB	2023-04-04 10:48:28
LI _(max)	83.9 dB	2023-04-04 10:50:43	94.0 dB	2023-04-04 10:52:48	99.2 dB	2023-04-04 10:48:28
LS _(min)	48.0 dB	2023-04-04 10:56:24	62.8 dB	2023-04-04 10:56:24	66.0 dB	2023-04-04 10:56:23
LF _(min)	47.4 dB	2023-04-04 10:56:22	60.6 dB	2023-04-04 10:51:40	63.2 dB	2023-04-04 10:51:40
LI _(min)	47.6 dB	2023-04-04 10:56:21	63.1 dB	2023-04-04 10:51:40	66.5 dB	2023-04-04 10:51:40
L _{Peak(max)}	92.3 dB	2023-04-04 10:50:43	98.2 dB	2023-04-04 10:52:48	101.5 dB	2023-04-04 10:48:28

Overloads

Count

Duration

OBA Count

OBA Duration

0

0:00:00.0

0

0:00:00.0

Statistics

LAS 5.0	67.7 dB
LAS 10.0	66.4 dB
LAS 33.3	61.9 dB
LAS 50.0	58.8 dB
LAS 66.6	56.4 dB
LAS 90.0	53.0 dB

APPENDIX C

RCNM Model Construction Within Street Right of Ways Noise Calculations

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 5/7/2023

Case Description: Taft Sewer - Segment 1 Taft Ave (west)/Glassell

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)					
		Daytime	Evening	Night			
Nearest Home	Residential	62.4	62.4	62.4			
Description		Impact Device	Usage(%)	Equipment Spec	Actual	Receptor Distance	Estimated
				Lmax (dBA)	Lmax (dBA)	(feet)	Shielding (dBA)
Concrete Saw		No	20		89.6	190	0
Hydra Break Ram		Yes	10	90		190	0

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day Lmax	Leq	Noise Limits (dBA)	
Concrete Saw	78.0	71.0	N/A	N/A	Evening Lmax	Leq
Hydra Break Ram	78.4	68.4	N/A	N/A	N/A	N/A
Total	78	73	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 5/7/2023

Case Description: Taft Sewer - Segment 2 Taft Ave (west)/Cambridge St

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)			Equipment Spec	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
		Daytime	Evening	Night				
Nearest Home	Residential	62.4	62.4	62.4				
Description		Impact Device	Usage(%)	Lmax (dBA)				
Concrete Saw		No	20			89.6	60	0
Hydra Break Ram		Yes	10	90			60	0

Results

Equipment	Calculated (dBA)		Day Lmax	Noise Limits (dBA)		
	*Lmax	Leq		Leq	Evening Lmax	Leq
Concrete Saw	88.0	81.0	N/A	N/A	N/A	N/A
Hydra Break Ram	88.4	78.4	N/A	N/A	N/A	N/A
Total	88	83	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 5/7/2023

Case Description: Taft Sewer - Segement 3 Taft Ave/Tustin St

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Home	Residential	64.3	64.3	62.0

Description	Impact Device	Usage(%)	Equipment Spec	Actual	Receptor Distance	Estimated Shielding
			Lmax (dBA)	Lmax (dBA)	(feet)	(dBA)
Concrete Saw	No	20		89.6	55	0
Hydra Break Ram	Yes	10	90		55	0

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day Lmax	Leq	Noise Limits (dBA) Evening Lmax	Leq
Concrete Saw	88.8	81.8	N/A	N/A	N/A	N/A
Hydra Break Ram	89.2	79.2	N/A	N/A	N/A	N/A
Total	89	84	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 5/7/2023

Case Description: Taft Sewer - Segment 4 Tustin St

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)
Nearest Home	Residential	Daytime 61.4

Evening 61.4	Night 59.1
-----------------	---------------

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	220	5
Hydra Break Ram	Yes	10	90		220	5

Equipment	Calculated (dBA)		Results		Noise Limits (dBA)	
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Concrete Saw	71.7	64.7	N/A	N/A	N/A	N/A
Hydra Break Ram	72.1	62.1	N/A	N/A	N/A	N/A
Total	72	67	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 5/7/2023

Case Description: Taft Sewer - Segment 5 Taft Ave (east)

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Home	Residential	69.7	69.8	64.0

Description	Impact Device	Usage(%)	Equipment Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Concrete Saw	No	20		89.6	50	0
Hydra Break Ram	Yes	10	90		50	0

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day Lmax	Leq	Noise Limits (dBA) Evening Lmax	Leq
Concrete Saw	89.6	82.6	N/A	N/A	N/A	N/A
Hydra Break Ram	90.0	80.0	N/A	N/A	N/A	N/A
Total	90	85	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 5/7/2023

Case Description: Taft Sewer - Segment 6 Sacramento St

		Baselines (dBA)			---- Receptor #1 ----		
Description	Land Use	Daytime	Evening	Night			
Nearest Home	Residential	55.8	55.8	55.8			
				Equipment Spec	Actual	Receptor	Estimated
		Impact Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Concrete Saw		No	20		89.6	50	0
Hydra Break Ram		Yes	10	90		50	0
				Results			
		Calculated (dBA)		Day	Noise Limits (dBA)		
		*Lmax	Leq	Lmax	Leq	Evening	Leq
Concrete Saw		89.6	82.6	N/A	N/A	N/A	N/A
Hydra Break Ram		90.0	80.0	N/A	N/A	N/A	N/A
Total		90	85	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 5/7/2023

Case Description: Taft Sewer - Segment 7 Meats Ave

		Baselines (dBA)			---- Receptor #1 ----		
Description	Land Use	Daytime	Evening	Night			
Nearest Home	Residential	62.4	62.4	62.4			
				Equipment Spec	Actual	Receptor Distance	Estimated Shielding
Description		Impact Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	(feet)	(dBA)
Concrete Saw		No	20		89.6	50	0
Hydra Break Ram		Yes	10	90		50	0
		Calculated (dBA)		Results			
				Noise Limits (dBA)			
				Day Lmax	Leq	Evening Lmax	Leq
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw		89.6	82.6	N/A	N/A	N/A	N/A
Hydra Break Ram		90.0	80.0	N/A	N/A	N/A	N/A
Total		90	85	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

APPENDIX D

RCNM Model Construction Outside of Street Right of Ways Noise Calculations

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 6/1/2023
Case Description: Taft Sewer - SCE Staging Areas

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		Night			
		Daytime	Evening		Equipment Spec	Actual	Receptor Distance
Nearest Home to West Staging Area	Residential	69.8	69.8	64			
Description		Impact		Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)
		Device					
Dump Truck		No		40		76.5	380
Generator		No		50		80.6	380
Equipment		Calculated (dBA)		Leq	Noise Limits (dBA)		Leq
		*Lmax			Day	Evening	
Dump Truck		58.8		54.9	N/A	N/A	N/A
Generator		63		60	N/A	N/A	N/A
Total		63		61	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		Night			
		Daytime	Evening		Equipment Spec	Actual	Receptor Distance
Nearest Home to East Staging Area	Residential	69.8	69.8	64.0			
Description		Impact		Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)
		Device					
Dump Truck		No		40		76.5	100
Generator		No		50		80.6	100
Equipment		Calculated (dBA)		Leq	Noise Limits (dBA)		Leq
		*Lmax			Day	Evening	
Dump Truck		65.4		61.5	N/A	N/A	N/A
Generator		69.6		66.6	N/A	N/A	N/A
Total		70		68	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.



Mitigation Monitoring and Reporting Program

Taft Avenue Sewer Improvement Project

State Clearinghouse Number 2023070293

Prepared by:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708

With Assistance From:



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November 2023

1. MITIGATION MONITORING AND REPORTING PROGRAM

The California Environmental Quality Act (CEQA) requires that when a lead agency adopts a Mitigated Negative Declaration (MND), it shall prepare a monitoring or reporting program for all required mitigation measures (CEQA Guidelines Section 15097). This Mitigation Monitoring and Reporting Program (MMRP) describes the monitoring and reporting program for mitigation measures adopted by Orange County Sanitation District (OC San) to avoid or substantially reduce impacts related to the Taft Avenue Sewer Improvement Project (proposed project) to less than significant levels and has been prepared in accordance with Public Resources Code Section 21081.6 and State CEQA Guidelines Section 15097. This MMRP will be used by OC San to ensure that the mitigation measures identified in the MND are implemented.

1.1 Program Administration

The MMRP shall be administered by OC San and the project's mitigation measures shall be incorporated into design and construction contracts, as appropriate, to ensure full implementation. The MMRP shall be maintained by the designated OC San Project Manager and be available for inspection upon request at OC San's offices.

1.2 Project Description

The proposed project was included in the Orange County Sanitation District 2020 Program Environmental Impact Report Facilities Master Plan (the PEIR). In that document, the proposed project was referred to as "project 2-49," consistent with the numbering of the sewer collection system improvement projects in the Facilities Master Plan (FMP). The Initial Study and this MMRP incorporate mitigation measures from the PEIR, as appropriate.

The Taft Avenue Sewer Improvement Project involves replacement and relocation of a portion of the Taft Branch regional sewer in the City of Orange. The project includes construction and operation of approximately 11,000 linear feet of vitrified clay sewer pipelines, ranging in size from 8 to 21 inches in diameter, and 39 new maintenance holes. The proposed project would connect to the existing City of Orange sewer at the intersection of Meats Avenue and Santiago Boulevard and to the existing OC San sewer at the intersection of Taft Avenue and Glassell Street. The proposed project would abandon approximately 8,000 feet of existing sewer pipeline and would remove 32 existing maintenance holes.

The proposed project would address anticipated capacity issues during wet-weather events as identified in OC San's 2019 Master Plan Update Report, which showed potential risk of sanitary sewer overflows within the Taft Branch regional sewer system.

The project would be constructed entirely within the City of Orange, in Orange County, California. The project would be constructed within the existing City of Orange right-of-way, along Meats Avenue from west of Santiago Boulevard to Breckenridge Street, south along Sacramento Street, west along Taft Avenue, crossing California Department of Transportation (Caltrans) State Route 55, south along Tustin Street, and west along Taft Avenue to Glassell Street. The project area is fully built out. Surrounding land uses include commercial, residential, industrial, and public facilities.

2. MITIGATION MONITORING AND REPORTING REQUIREMENTS

A mitigation monitoring and reporting checklist has been developed for the proposed project and is intended for use by Orange County Sanitation District, as lead agency and designated monitoring entity for the proposed project. The checklist, presented as **Table 1**, summarizes the mitigation requirements and the timing for implementing those mitigation measures. It also identifies responsible parties for ensuring implementation of each mitigation measure. These mitigation measures are presented here using the naming conventions and categories in the MND.

Table MMRP-1: Mitigation Monitoring and Reporting Checklist

Mitigation Measure	Impact Statement	Party Responsible for Implementation	Party Responsible for Monitoring and Reporting	Monitoring and Reporting Actions	Implementation Schedule	Verification of Compliance: Completion date and Initials
Aesthetics						
Mitigation Measure AES-1: Construction Lighting. Should nighttime construction be required, a construction safety lighting plan shall be submitted to the OC San Director of Engineering for review and approval prior to any nighttime construction activities. The Construction Safety Lighting Plan shall require that all construction-related lighting fixtures (including portable fixtures) shall be oriented downward and away from adjacent sensitive areas (including residential and biologically sensitive areas) and that all lighting shall consist of the minimal wattage necessary to provide safety at the construction site.	Impact 3.1d – Potential to create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	OC San, Construction Contractor	OC San construction manager	<ul style="list-style-type: none"> Confirm mitigation measure is incorporated into construction contractor specifications If nighttime construction lighting is expected, confirm that Construction Safety Lighting Plan is submitted to OC San Director of Engineering for review and approval prior to construction Monitor nighttime activities weekly to verify that construction Safety Lighting Plan is implemented Retain copy of Construction Safety Lighting Plan and construction monitoring records in project file 	Pre-construction, (during preparation of contractor specifications) Pre-construction Construction Construction	
Air Quality						
Mitigation Measure AQ-1: Tier 4 Final Engines. Prior to the commencement of construction activities for each project, OC San shall require its construction contractor to demonstrate that all 50-horsepower or greater diesel-powered equipment is powered with California Air Resources Board (CARB)-certified Tier 4 Final engines. An exemption from this requirement may be granted if (1) OC San documents equipment with Tier 4 Final engines are not reasonably available, and (2) the required corresponding reductions in criteria air pollutant emissions can be achieved for the project from other combinations of construction equipment. Before an exemption may be granted, OC San’s construction contractor shall: (1) demonstrate that at least two construction fleet owners/operators in Orange County were contacted and that those owners/operators confirmed Tier 4 Final equipment could not be located within Orange County during the desired construction schedule; and (2) the proposed replacement	Impact 3.3b – Potential to result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard. Impact 3.3c – Potential to expose sensitive receptors to substantial pollutant concentrations.	OC San, Construction Contractor	OC San construction manager	<ul style="list-style-type: none"> Confirm mitigation measure is incorporated into construction contractor specifications Perform site inspections, once at the start of construction and once half-way through construction, to verify contractor compliance Retain copies of inspection records in the project file 	Pre-construction (during preparation of contractor specifications) Construction Construction	

Mitigation Measure	Impact Statement	Party Responsible for Implementation	Party Responsible for Monitoring and Reporting	Monitoring and Reporting Actions	Implementation Schedule	Verification of Compliance: Completion date and Initials
equipment has been evaluated using California Emissions Estimator Model (CalEEMod) or other industry standard emission estimation method and documentation provided to OC San to confirm that project-generated emissions do not exceed applicable SCAQMD mass daily thresholds, the applicable SCAQMD localized significance thresholds, or the SCAQMD carcinogenic (cancer) risk threshold.						
Biological Resources						
BIO 1: Nesting Bird Avoidance. Construction activities for project-level and program-level projects shall avoid the migratory bird nesting season (typically February 1 through August 31), to reduce any potential significant impact to birds that may be nesting within 500 feet of project sites. If construction activities must occur during the migratory bird nesting season, an avian nesting survey of the project site and suitable habitat within 500 feet of the site shall be conducted for protected migratory birds and active nests. The avian nesting survey shall be performed by a qualified biologist meeting the standards in the field within 72 hours prior to the start of construction in accordance with the Migratory Bird Treaty Act (16 USC 703–712) and California Fish and Game Code, Sections 3503, 3503.5, and 3513. If an active bird nest is found, the nest shall be flagged and an appropriate buffer established around the nest, which shall be determined by the biologist based on the species’ sensitivity to disturbance (up to 300 feet for passerines and up to 500 feet for raptors and special-status species). The nest area shall be avoided until the nest is vacated and the juveniles have fledged. No project activities may encroach into the buffer until a qualified biologist has determined that the nestlings have fledged, and the nest is no longer active.	Impact 3.4a – Potential to have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	OC San	OC San construction manager	<ul style="list-style-type: none"> Confirm that construction contractor specifications include mitigation measure If construction occurs between February 1 and August 31, retain a qualified biologist for avian nesting survey and confirm avian nesting survey is completed no more than three days prior to the start of clearance/ construction work. If a nest is identified in the avian nesting survey, verify appropriate avoidance buffer is established and that no project activities encroach into the buffer until biologist determines that nest is no longer active Retain copies of all surveys and reports in project file 	Pre-construction (during preparation of contractor specifications) Pre-construction Pre-construction and construction Construction	

Mitigation Measure	Impact Statement	Party Responsible for Implementation	Party Responsible for Monitoring and Reporting	Monitoring and Reporting Actions	Implementation Schedule	Verification of Compliance: Completion date and Initials
BIO 2: Public and Parkway Trees. If the final project design for project-level and program-level projects determines that public and parkway trees may be impacted during project construction for any project-level and program-level projects that occur within the City of Huntington Beach, the City of Fountain Valley, and any other city with a tree protection ordinance (e.g., City of Orange Municipal Code Chapter 12.28 Street Trees), a permit or permission from the applicable city must be obtained prior to cutting, trimming, pruning, or removing any tree, shrub or plant.	Impact 3.4e – Potential to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	OC San, Construction Contractor	OC San construction manager	<ul style="list-style-type: none"> Confirm that construction contractor specifications include mitigation measure If a Street Tree may be impacted, confirm a Street Tree Removal or Planting Permit is obtained Retain copies of permits in project file 	Pre-construction (during preparation of contractor specifications) Pre-construction Construction	
Cultural Resources						
CUL-1: Worker Cultural Resources Sensitivity Training. Prior to start of ground-disturbing activities, the qualified archaeologist meeting the Secretary of the Interior’s Professional Qualifications Standards for archaeology (or an archaeologist working under the direct supervision of the qualified archaeologist) shall be retained by the Orange County Sanitation District (OC San) and shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel shall be informed of the types of archaeological resources that may be encountered, the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains, and safety precautions to be taken when working with archaeological monitors. The OC San contractor shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.	Impact 3.5a – Potential to cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5. Impact 3.5b – Potential to cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5. Impact 3.5c – Potential to disturb any human remains, including those interred outside of dedicated cemeteries. Impact 3.18a – Potential to cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: Listed or eligible for listing in the California Register of Historical	OC San, Construction Contractor	OC San construction manager	<ul style="list-style-type: none"> Confirm that mitigation measure is included in construction contractor specifications Retain a qualified archaeologist and confirm preparation of cultural resources sensitivity training materials Confirm cultural resources sensitivity training for all construction personnel is held Retain documentation demonstrating attendance of construction personnel to cultural resources sensitivity training (e.g., sign-in sheet) in project file 	Pre-construction (during preparation of contractor specifications) Pre-construction Pre-construction Construction	

Mitigation Measure	Impact Statement	Party Responsible for Implementation	Party Responsible for Monitoring and Reporting	Monitoring and Reporting Actions	Implementation Schedule	Verification of Compliance: Completion date and Initials
	Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.					
<p>CUL-2: Treatment of Archaeological Materials.</p> <p>In the event of the unanticipated discovery of archaeological materials during ground-disturbing activities associated with the proposed project, OC San shall immediately cease all work activities in the area (within 100 feet) of the discovery until it can be evaluated by the qualified archaeologist. Construction shall not resume until the qualified archaeologist has conferred with OC San on the significance of the resource. In the event that preservation in place is determined to be infeasible and data recovery through excavation is the only feasible mitigation available, an Archaeological Resources Treatment Plan, in accordance with the Advisory Council on Historic Preservation’s 2009 Section 106 Archaeology Guidance, shall be prepared and implemented by the qualified archaeologist in consultation with OC San. The Archaeological Resources Treatment Plan will provide for the adequate recovery of the scientifically consequential information contained in the archaeological resource. OC San shall consult with appropriate Native American representatives in determining treatment for pre-contact or Native American resources. The treatment options after data recovery efforts occur may include returning the resource to the appropriate tribe or donation of the resource to a repository identified by the tribe. If preservation in place is not an option or re-deposition on site is not an option, the resource will be curated at an archaeological curation facility (compliant with standards established in 36 CFR 79, Sections 9, 10, and 11).</p>	<p>Impact 3.5a – Potential to cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.</p> <p>Impact 3.5b – Potential to cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5.</p> <p>Impact 3.5c – Potential to disturb any human remains, including those interred outside of dedicated cemeteries</p> <p>Impact 3.18a – Potential to cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural</p>	OC San, Construction Contractor	OC San construction manager	<ul style="list-style-type: none"> Confirm mitigation measure is included in construction contractor specifications Confirm work stopped in immediate vicinity if archaeological materials are discovered until artifacts evaluated and authorization to resume construction is given If data recovery through excavation is required, confirm an Archaeological Resources Treatment Plan is prepared and implemented. Retain copy of Archaeological Resources Treatment Plan, any correspondence between OC San or the archaeologist and Native American representative(s), and curation or treatment reports in project file 	<p>Pre-construction (during preparation of contractor specifications)</p> <p>Construction</p> <p>Construction</p> <p>Construction</p>	

Mitigation Measure	Impact Statement	Party Responsible for Implementation	Party Responsible for Monitoring and Reporting	Monitoring and Reporting Actions	Implementation Schedule	Verification of Compliance: Completion date and Initials
	value to a California Native American tribe, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.					
Geology and Soils						
Mitigation Measure GEO-1: Paleontological Resources Prior to commencement of any construction phase ground-disturbing activity in areas of moderate to high paleontological sensitivity (the Taft Branch Improvement Project is identified as an area of “moderate” paleontological sensitivity, see PEIR Figure 4.6-1), OC San shall retain a qualified paleontologist per the 2010 Society of Vertebrate Paleontology guidelines. The paleontologist shall prepare a paleontological resources impact mitigation program for the project that reduces all impacts to less than significant. The paleontological resources impact mitigation program shall be consistent with the Society of Vertebrate Paleontology guidelines and shall include: requirements for preconstruction meeting attendance and worker environmental awareness training, where monitoring is required within the project area based on construction plans and/or geotechnical reports; procedures for adequate paleontological monitoring and discoveries treatment; and paleontological methods (including sediment sampling for microvertebrate fossils), reporting, and collections management. The qualified paleontologist shall attend the preconstruction meeting, and a paleontological monitor under the direction of	Impact 3.7f – Potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	OC San, Constructor Contractor	OC San construction manager	<ul style="list-style-type: none"> Confirm that mitigation measure is included in construction contractor specifications Retain a qualified paleontologist and confirm preparation of a paleontological resources impact mitigation program Confirm qualified paleontologist attends the preconstruction meeting Confirm paleontological monitor is on site during initial ground-disturbing activities in areas of previously undisturbed moderate and/or high paleontological resources sensitivity Confirm work stopped in immediate vicinity if fossil discovered until authorization to 	Pre-construction (during preparation of contractor specifications) Pre-construction Pre-construction Construction Construction	

Mitigation Measure	Impact Statement	Party Responsible for Implementation	Party Responsible for Monitoring and Reporting	Monitoring and Reporting Actions	Implementation Schedule	Verification of Compliance: Completion date and Initials
the qualified paleontologist shall be on site during initial ground-disturbing activities in areas of previously undisturbed moderate and/or high paleontological resources sensitivity. In the event that paleontological resources (e.g., fossils) are unearthed, the paleontological monitor shall temporarily halt and/or divert ground-disturbing activity to allow recovery of paleontological resources. The area of discovery shall be roped off with a 50-foot-radius buffer. Once documentation and collection of the find is completed, the paleontological monitor shall allow ground-disturbing activities to recommence in the area of the find.				<p>resume construction is given</p> <ul style="list-style-type: none"> Confirm fossils, if found, are assessed, salvaged, and curated by qualified experts, as applicable Retain documentation demonstrating attendance of construction personnel at fossil discovery training and paleontological resources impact mitigation program in project file 	<p>Construction</p> <p>Construction</p>	
Hazards and Hazardous Materials						
<p>Mitigation Measure HAZ-1: Pre-Demolition Hazardous Material Survey and Abatement</p> <p>A survey will be conducted on collection system projects to identify yellow traffic striping that may contain lead chromate and asphalt that may contain asbestos. Following results of the hazardous materials survey, and incorporating information from current lead and asbestos inventories, demolition or renovation plans and contract specifications, including those for road-disturbing activities, shall incorporate abatement procedures for the removal of materials containing asbestos, lead, and universal waste items, as required by law. All abatement work shall be done in accordance with federal, state, and local regulations, including those of the U.S. Environmental Protection Agency, Occupational Safety and Health Administration, California Occupational Safety and Health Administration, and the South Coast Air Quality Management District.</p>	<p>Impact 3.9a – Potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.</p> <p>Impact 3.9b – Potential to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.</p> <p>Impact 3.9c – Potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.</p>	OC San, Construction Contractor	OC San construction manager	<ul style="list-style-type: none"> Confirm mitigation measure is included in construction contractor specifications Confirm contractor conducts a hazardous materials survey prior to commencement of construction activities Confirm contractor incorporates abatement procedures into demolition and renovation plans and contract specifications in accordance with federal, state, and local regulations Retain a copy of the hazardous materials survey in the project file 	<p>Pre-construction (during prep of contractor specs)</p> <p>Pre-construction</p> <p>Construction</p> <p>Construction</p>	
<p>Mitigation Measure HAZ-2: Hazards Contingency Plan.</p> <p>Prior to commencement of any ground-disturbing activities where it has been determined that hazardous materials are present and will be disturbed (see Mitigation Measure HAZ-1), a Hazards Contingency Plan shall be developed that addresses potential impacts to soil, soil vapor, and groundwater from releases on or near the project sites. The Hazards Contingency Plan shall include training procedures for identification of contamination. The Hazards Contingency Plan shall describe</p>	<p>Impact 3.9b – Potential to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.</p> <p>Impact 3.9c – Potential to emit</p>	OC San, Construction Contractor	OC San construction manager	<ul style="list-style-type: none"> Confirm mitigation measure is included in construction contractor specifications Confirm the contractor has prepared and implemented a Hazards Contingency Plan, as needed per the hazardous material survey, 	<p>Pre-construction (during preparation of contractor specifications)</p> <p>Construction</p>	

Mitigation Measure	Impact Statement	Party Responsible for Implementation	Party Responsible for Monitoring and Reporting	Monitoring and Reporting Actions	Implementation Schedule	Verification of Compliance: Completion date and Initials
procedures for assessment, characterization, management, and disposal of hazardous constituents, materials, and wastes, in accordance with all applicable state and local regulations. Contaminated soils and/or groundwater shall be managed and disposed of in accordance with local and state regulations. The Hazards Contingency Plan shall include health and safety measures, which may include but are not limited to periodic work breathing zone monitoring and monitoring for volatile organic compounds using a handheld organic vapor analyzer in the event impacted soils are encountered during excavation activities. As opposed to a single document, all necessary elements of a Hazards Contingency Plan may be developed into contract specifications.	hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Impact 3.9d – Potential to be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.			and it is available on-site. <ul style="list-style-type: none"> Retain a copy of the Hazards Contingency Plan in the project file 	Construction	
Mitigation Measure HAZ-3: Monitoring Well Protection. Monitoring wells associated with nearby cleanup sites may be located within the proposed project boundaries. Some of these wells may still be actively monitored as part of required cleanup activities. The agency overseeing the associated cleanup site (Regional Water Quality Control Board, Department of Toxic Substances Control, or Orange County Health Care Agency) will be consulted prior to project activities that could affect the monitoring wells to determine the best plan of action to either decommission and destroy, protect, and/or replace affected monitoring wells.	Impact 3.9b – Potential to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	OC San, Construction Contractor	OC San construction manager	<ul style="list-style-type: none"> Confirm mitigation measure is included in construction contractor specifications Confirm consultation with the applicable overseeing agency(ies) is held prior to construction for project activities that could affect a monitoring well Retain a copy of consultation note(s) in the project file 	Pre-construction (during prep of contractor specifications) Pre-construction Construction	
Noise						
Mitigation Measure NOI-1: Noise Reduction Measures. For Facilities Master Plan (FMP) projects located within 500 feet of noise-sensitive receivers (residences, hotels and motels, educational institutions, libraries, hospitals, and clinics), the following measures shall be implemented: A. All mobile or fixed noise-producing equipment used on an FMP project that is regulated for noise output by a local, state, or federal agency shall comply with such regulation while in the course of program activity. B. Construction equipment shall be properly outfitted and maintained with manufacturer-recommended noise-reduction devices to minimize construction-generated noise.	Impact 3.13a – Potential generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	OC San, Construction Contractor	OC San construction manager	<ul style="list-style-type: none"> Confirm noise reduction mitigation measures are included in construction contractor specifications Confirm that OC San or its designee coordinates with local jurisdictions and sensitive receptors within 500-feet regarding any potential project-specific noise-related issues prior to the start of construction Conduct weekly monitoring to confirm noise reduction measures are implemented during 	Pre-construction (during preparation of contractor specifications) Pre-construction Construction	

Mitigation Measure	Impact Statement	Party Responsible for Implementation	Party Responsible for Monitoring and Reporting	Monitoring and Reporting Actions	Implementation Schedule	Verification of Compliance: Completion date and Initials
<p>C. Electrically powered equipment shall be used instead of pneumatic or internal-combustion-powered equipment, where feasible.</p> <p>D. Stationary noise sources such as generators or pumps shall be located at least 100 feet from noise-sensitive land uses as feasible.</p> <p>E. Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.</p> <p>F. Construction site and haul-road speed limits shall be established and enforced during the construction period.</p> <p>G. As feasible, the hours of construction, including noise-generating activities and all spoils and material transport, shall be restricted to the time periods and days permitted by the local noise or other applicable ordinances. As necessary, the OC San shall coordinate with the applicable local jurisdiction regarding activities that are not consistent with local ordinances to avoid/minimize impacts.</p> <p>H. The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. Additionally, pursuant to Occupational Safety and Health Act Sections 1926.601(b)(4) and 1926.602(a)(9), a device that uses broadband “white noise” instead of a single-tone alarm may be used if it is shown to be effective.</p> <p>I. The Orange County Sanitation District or its designees shall coordinate with local jurisdictions and sensitive receptors regarding the proposed FMP to address any potential project-specific noise-related issues prior to commencement of construction activities.</p> <p>J. Noise-reduction measures such as exhaust mufflers, sound blankets or temporary sound walls shall be used to reduce noise from noise-generating equipment and activities during construction.</p>				<p>construction</p> <ul style="list-style-type: none"> Retain documentation of any communication in project file 	Construction	
<p>Mitigation Measure NOI-2: Nighttime Noise Reduction Measures.</p> <p>In order to ensure construction noise at nearby residences does not exceed the standards detailed in Section 8.24.050(E) of the City of Orange Municipal Code, prior to the start of nighttime construction for Pipeline Segment 4, 500 feet on Tustin Street, OC San shall ensure the following nighttime noise reduction</p>	<p>Impact 3.13a – Potential generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of</p>	OC San, Construction Contractor	OC San construction manager	<ul style="list-style-type: none"> Confirm nighttime noise reduction mitigation measures are included in construction contractor specifications Prior to the start of nighttime construction 	<p>Pre-construction (during preparation of contractor specifications)</p> <p>Pre-construction</p>	

Mitigation Measure	Impact Statement	Party Responsible for Implementation	Party Responsible for Monitoring and Reporting	Monitoring and Reporting Actions	Implementation Schedule	Verification of Compliance: Completion date and Initials
<p>measures are in place:</p> <ul style="list-style-type: none"> The construction contractor shall establish a current nighttime ambient noise level at the nearest residential property, 1612 E Briardale Avenue, or accept on the 24-hour average nighttime ambient noise level measured in the Noise Impact Analysis (Appendix E) of 59.1 dBA Leq. The contractor shall install temporary construction noise barriers. These barriers shall block the line of sight between the equipment and the nearest residential property and shall provide a minimum of 10 dBA of noise attenuation. The construction noise barrier shall be constructed with no gaps or perforations. It shall remain in place until the conclusion of the nighttime construction activities. The project plans and specifications shall include documentation verifying the inclusion of an appropriate noise barrier. The construction contractor shall monitor noise levels during nighttime construction activities, as needed, to ensure they do not exceed ambient noise levels or 70 dBA, whichever is less. 	other agencies.			<p>for Pipeline Segment 4, 500 feet on Tustin Street, confirm ambient noise level established and temporary construction noise barriers are installed between construction equipment and noise-sensitive receptor(s)</p> <ul style="list-style-type: none"> Conduct weekly monitoring of mitigation commitments during construction to ensure noise barrier provides noise attenuation to achieve ambient noise level or 70 dBA Retain documentation of periodic monitoring in project file 	<p>(for Pipeline Segment 4)</p> <p>Construction (for Pipeline Segment 4)</p> <p>Construction</p>	
<p>Mitigation Measure NOI-3: Time of Day Restrictions.</p> <p>In order to ensure construction noise at nearby residences does not exceed the City of Orange noise standards as detailed in Section 8.24.050(E) of the City of Orange Municipal Code, if the Staging Area located on the east side of State Route 55 is used as part of the proposed project, all activities within this Staging Area shall be limited to when construction activities are exempt from the City noise standards as detailed in Section 8.24.050(E) of the City of Orange Municipal Code. No time-of-day restrictions are placed on the SCE Staging Area located on the west side of State Route 55.</p>	<p>Impact 3.13a – Potential generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.</p>	OC San, Construction Contractor	OC San construction manager	<ul style="list-style-type: none"> Confirm time of day restrictions are included in construction contractor specifications On a weekly basis, confirm activities on vacant parcels used as staging areas are limited to hours when construction activities are exempt from the City noise standards Retain documentation in project file 	<p>Pre-construction (during preparation of contractor specifications)</p> <p>Construction (within staging areas)</p> <p>Construction</p>	
Transportation						
<p>Mitigation Measure TRA-1: Coordination with Cities, Caltrans</p> <p>Prior to initiation of construction activities, engineering drawings and specifications and/or contractor shop drawings shall be submitted for review and approval by OC San, to the Public Works Departments of Orange and Village Park, the California Department of Transportation (Caltrans), and Union Pacific</p>	<p>Impact 3.9f – Potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.</p> <p>Impact 3.17a – Potential to conflict</p>	OC San, Construction Contractor	OC San construction manager	<ul style="list-style-type: none"> Confirm construction contractor specifications include mitigation measure Confirm that engineering drawings and 	<p>Pre-construction (during preparation of contractor specifications)</p> <p>Pre-construction</p>	

Mitigation Measure	Impact Statement	Party Responsible for Implementation	Party Responsible for Monitoring and Reporting	Monitoring and Reporting Actions	Implementation Schedule	Verification of Compliance: Completion date and Initials
<p>Railroad and/or Metrolink (where applicable). The proposed project may impact local transportation facilities due to temporary street and/or lane closures, temporary transit stop relocations, haul truck circulation, and construction staging. These impacts, if any, will be identified in the engineering drawings and specifications and/or contractor shop drawings identified for individual projects. The following steps will be required to mitigate construction traffic impacts identified in the engineering drawings and specifications and/or contractor shop drawings:</p> <p><u>Closures to Transportation Facilities</u></p> <p>A. Traffic control, and associated Traffic Control Plans, for any lane closure, detour, or other disruption to traffic circulation, including bicycle and pedestrian trails. Bicycle and pedestrian trails shall remain open, to the greatest extent possible, during construction or re-routed to ensure continued connectivity.</p> <p>B. Engineering drawings and specifications shall meet the standards established in the current California Manual on Uniform Traffic Control Device.</p> <p>C. Bus stop access impacts shall be coordinated with, and approved by, the Orange County Transportation Authority.</p> <p>D. Consistent with applicable City and/or Caltrans requirements, and at least three (3) business days before any construction activities that would affect travel on nearby roadways, the construction contractor shall notify the affected City Public Works Department and/or Caltrans of construction activities that could impede movement (such as lane closures) along roadways to allow for uninterrupted emergency access. Surrounding property owners shall also be notified of construction activities through the OC San Public Outreach Process.</p> <p><u>Truck Haul Routes and Circulation</u></p> <p>E. As required by the applicable agency, construction vehicle haul routes for the delivery of construction materials (e.g., lumber, tiles, piping, windows) to the site, necessary traffic controls and detours, and a construction phasing plan for the construction activities shall be identified.</p> <p>F. The hours during which transport activities can occur and</p>	<p>with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.</p> <p>Impact 3.17c – Potential to substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).</p> <p>Impact 3.17d – Potential to result in inadequate emergency access.</p>			<p>specifications and/or contractor shop drawings are approved by the appropriate local, state, and federal agencies</p> <ul style="list-style-type: none"> Confirm the City Public Works Department and/or Caltrans and surrounding property owners were notified of construction activities through the OC San Public Outreach Process prior to start of construction Confirm traffic control measures identified in the mitigation measure are implemented during construction Retain copy of any communication or traffic control documentation in project file 	<p>Pre-construction</p> <p>Construction</p> <p>Construction</p>	

Mitigation Measure	Impact Statement	Party Responsible for Implementation	Party Responsible for Monitoring and Reporting	Monitoring and Reporting Actions	Implementation Schedule	Verification of Compliance: Completion date and Initials
<p>methods to mitigate construction-related impacts to adjacent streets shall be specified. Examples of these methods include: 1) transport of materials and heavy equipment to the site(s) shall be avoided during the AM and PM peak commute hours; 2) haul trucks shall utilize designated truck routes to the extent feasible; 3) advance warning signage and/or detour routes shall be provided along streets where construction activities would occur; and, 4) scheduling of construction activities and workers at each individual site so that less than 110 daily trips would occur.</p> <p>G. The contractor shall be required to keep all haul routes clean and free of debris, including gravel and dirt resulting from its operations. The contractor shall clean adjacent streets, as directed by the OC San, of any material that may have been spilled, tracked, or blown onto adjacent streets and areas.</p> <p>H. As required by the applicable agency, hauling and transport of oversize loads outside of their standard working hours will require approvals.</p> <p>I. Use of local streets shall be prohibited, except what is required to provide direct access to a construction site.</p> <p>J. Haul trucks entering or exiting public streets shall yield to public traffic at all times.</p> <p>K. If hauling operations cause any damage to existing pavement, streets, curbs, and/or gutters along the haul route, the contractor shall be fully responsible for repairs. The repairs shall restore the damaged property to its original condition.</p> <p><u>Construction Staging</u></p> <p>L. Any off-site construction staging or material storage sites shall be identified to the extent feasible.</p> <p>M. All project-related staging of vehicles shall be kept out of the adjacent public roadways and shall occur on site or within other off-street areas.</p>						
Tribal Cultural Resources						
TCR-1: Worker Environmental Awareness Program (WEAP): Prior to the start of ground-disturbing activities, OC San shall retain an archaeologist (Project Archaeologist) meeting the Secretary of the Interior's Professional Qualification Standards for archaeology (48 Federal Register 44716) to provide WEAP	Impact 3.18a – Potential to cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site,	OC San, Construction Contractor	OC San construction manager	<ul style="list-style-type: none">Confirm construction contractor specifications include mitigation measure	Pre-construction (during preparation of contractor specifications)	

Mitigation Measure	Impact Statement	Party Responsible for Implementation	Party Responsible for Monitoring and Reporting	Monitoring and Reporting Actions	Implementation Schedule	Verification of Compliance: Completion date and Initials
<p>training that focuses on the inadvertent discovery of archaeological and tribal cultural resources. The WEAP training shall be provided to all construction personnel prior to the commencement of any ground-disturbing activities and shall include, at minimum, the following topics so construction personnel will understand their responsibilities:</p> <ol style="list-style-type: none"> 1. What archaeological and tribal cultural resources are and why they are important 2. Review environmental laws that protect archaeological and tribal cultural resources, and the consequences of unauthorized collection of artifacts and other cultural material 3. Explain the protocol to be followed if an artifact or tribal/cultural resource feature is discovered during construction as identified in TCR-2; and 4. Explain the protocol to be followed if potential human remains or associated grave goods are encountered during construction as identified in TCR-2 and TCR-3. <p>Upon completion of the WEAP training, construction personnel will sign an acknowledgment that they attended the training, understand the training, and will comply with the protocols presented.</p>	<p>feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</p>			<ul style="list-style-type: none"> • Retain a qualified archaeologist and confirm preparation of training materials • Confirm Worker Environmental Awareness Program training for all construction personnel is held • Retain documentation demonstrating construction personnel acknowledgement of Worker Environmental Awareness Program training in project file 	<p>Pre-construction</p> <p>Pre-Construction</p> <p>Construction</p>	
<p>TCR-2: Develop and Implement a Cultural Resource Management Plan (CRMP).</p> <p>Prior to the start of ground-disturbing activities, OC San's Project Archaeologist shall develop a CRMP that includes protocols to be implemented for the potential scenarios that may arise with the discovery of unanticipated archaeological resources that may also qualify as tribal cultural resources. The CRMP shall follow the provisions of Section 15064.5(f) of the CEQA Guidelines. The CRMP shall also be consistent with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 Federal Register 44716-44740), the California Office of Historic Preservation's Archaeological Resource Management Reports: Recommended Contents and Format (1990), Guidelines for Archaeological Research Designs (1991), and Guidelines for the Curation of Archaeological Collections (1993), and the Advisory council on Historic Preservation's Treatment of Archaeological Properties: A</p>	<p>Impact 3.18a – Potential to cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or a resource determined</p>	OC San	OC San construction manager	<ul style="list-style-type: none"> • Confirm that construction contractor specifications include mitigation measure • Confirm that Project Archaeologist has developed a Cultural Resource Management Plan • Confirm Cultural Resource Management Plan is implemented, as required by the mitigation measure, including consultation with Tribe(s), in the event of the discovery of unanticipated archaeological resources • Retain copy of Cultural Resource 	<p>Pre-construction (during preparation of contractor specifications)</p> <p>Pre-construction</p> <p>Construction</p> <p>Construction</p>	

Mitigation Measure	Impact Statement	Party Responsible for Implementation	Party Responsible for Monitoring and Reporting	Monitoring and Reporting Actions	Implementation Schedule	Verification of Compliance: Completion date and Initials
<p>Handbook (1980).</p> <p>The CRMP shall meet the performance standards outlined above (and further identified below) to avoid, minimize, or mitigate impacts to unanticipated archaeological resources that may also qualify as tribal cultural resources:</p> <ol style="list-style-type: none">1. Discovery Response Protocols: The CRMP shall identify a stop work radius in the event of a discovery, define resource protection measures to be followed such as delineation of an Environmentally Sensitive Area (ESA), and define a notification protocol to guide OC San's consultation with Tribes when resources are discovered.2. Monitoring Protocols: The CRMP shall contain protocols for archaeological and tribal monitoring to be activated if sensitive resource areas are inadvertently discovered such as: Monitors will observe ground-disturbing work, coordinate with the OC San project lead/foreman if a work stoppage is required, and assist in the immediate implementation of the Discovery Response Protocols. The Monitoring Protocols shall include a description of roles and responsibilities and protocols for communication/notification in the event of a discovery.3. Evaluation and Treatment Protocols: The CRMP shall contain procedures for archaeological evaluation of discoveries in accordance with the CRHR criteria (14 CCR 4852[b]) and for treatment of resources found to be significant in the event that avoidance or preservation in place are not possible. The CRMP shall include:<ol style="list-style-type: none">a. A research design that contains an explicit statement of theoretical and methodological approaches to be followed, pursuant to the Secretary of the Interior's Standards for Archaeological Documentation (48 Federal Register 44734–44737).b. Specific field and laboratory methodologies appropriate for the environmental and cultural context of the area under study, as well as expected results and reasons for those expectations, pursuant to the Secretary of the Interior's Standards and Guidelines for Identification and Evaluation (48 FR 44720–44726).c. A treatment plan for recovering and preserving	<p>by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</p>			<p>Management Plan in project file</p>		

Mitigation Measure	Impact Statement	Party Responsible for Implementation	Party Responsible for Monitoring and Reporting	Monitoring and Reporting Actions	Implementation Schedule	Verification of Compliance: Completion date and Initials
<p>scientifically consequential data from intact archaeological deposits identified during the testing and evaluation phase that are determined to be significant according to the criteria set forth in the research design, following the guidelines provided in the Advisory Council on Historic Preservation’s Treatment of Archaeological Properties: A Handbook (1980). The treatment plan shall include provisions for determining the disposition or long-term curation of any archaeological materials that may be recovered during construction.</p> <p>4. Discovery Protocols for Human Remains and/or Funerary Objects, Sacred Objects, and Objects of Cultural Patrimony: The CRMP shall identify procedures to be implemented in the event of a discovery of human remains and/or funerary objects, sacred objects, and objects of cultural patrimony, consistent with the requirements of mitigation measure TCR-3, including requirements for Tribal consultation regarding arrangements for reburial in a culturally appropriate location. The CRMP shall also contain procedures for Tribal consultation in case isolated objects of Tribal significance are encountered in disturbed stratigraphic contexts, to ensure appropriate treatment or disposition of the objects.</p>						
<p>TCR-3: Discovery of Human Remains.</p> <p>In the event of an unanticipated discovery of human remains, in accordance with California Health and Safety Code Section 7050.5, the County Coroner shall be notified within 24 hours of the discovery. The project lead/foreman shall designate an Environmentally Sensitive Area (ESA) physical demarcation/barrier 100 feet around the resource and no further excavation or disturbance shall occur within the ESA until OC San, informed by the County Coroner of its decision, makes a determination regarding the disposition of the remains. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours. In accordance with Public Resources Code Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendant (MLD) from the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted</p>	<p>Impact 3.18a – Potential to cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or a resource determined</p>	OC San, Construction Contractor	OC San construction manager	<ul style="list-style-type: none"> Confirm mitigation measure is included in construction contractor specifications If human remains are found, coordinate with Orange County Coroner within 24 hours and cease construction within the Environmentally Sensitive Area If remains are determined to be Native American, verify MLD inspection and consultation, and that proper treatment and reburial has occurred, as applicable Document and retain records regarding 	<p>Pre-construction (during preparation of contractor specifications)</p> <p>Construction</p> <p>Construction</p> <p>Construction</p>	

Mitigation Measure	Impact Statement	Party Responsible for Implementation	Party Responsible for Monitoring and Reporting	Monitoring and Reporting Actions	Implementation Schedule	Verification of Compliance: Completion date and Initials
access to the site. In consultation with the MLD, OC San will determine the disposition of the human remains. OC San shall notify the project lead/foreman when the ESA may be released again for construction.	by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.			discovery of human remains in project file		

PART A
CONTRACT AGREEMENT

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CONTRACT AGREEMENT

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CONTRACT AGREEMENT
ORANGE COUNTY SANITATION DISTRICT

PROJECT NO. 2-49
TAFT BRANCH IMPROVEMENTS

THIS AGREEMENT is made and entered into, to be effective, this May 22, 2024, by and between Big Ben Inc., hereinafter referred to as "CONTRACTOR" and the Orange County Sanitation District, hereinafter referred to as "OC SAN".

WITNESSETH

That for and in consideration of the promises and agreements hereinafter made and exchanged, OC SAN and CONTRACTOR agree as follows:

SECTION – 1 GENERAL

CONTRACTOR certifies and agrees that all the terms, conditions and obligations of the Contract Documents as hereinafter defined, the location of the job site, and the conditions under which the Work is to be performed have been thoroughly reviewed, and enters into this Contract based upon CONTRACTOR's investigation of all such matters and is in no way relying upon any opinions or representations of OC SAN. It is agreed that this Contract represents the entire agreement. It is further agreed that the Contract Documents are each incorporated into this Contract by reference, with the same force and effect as if the same were set forth at length herein, and that CONTRACTOR and its Subcontractors, if any, will be and are bound by any and all of said Contract Documents insofar as they relate in any part or in any way, directly or indirectly, to the Work covered by this Contract.

A. Contract Documents Order of Precedence

"Contract Documents" refers to those documents identified in the definition of "Contract Documents" in the General Conditions, "Definitions".

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1. In the event of a conflict between one Contract Document and any of the other Contract Documents, the provisions in the document highest in precedence shall be controlling. The order of precedence of the Contract Documents is as follows:
 - a. Supplemental Agreements – the last in time being the first in precedence
 - b. Addenda issued prior to the date for submittal of Bids – the last in time being the first in precedence
 - c. Contract Agreement
 - d. Permits and other regulatory requirements
 - e. Special Provisions
 - f. General Conditions (GC)
 - g. Notice Inviting Bids and Instruction to Bidders
 - h. Geotechnical Baseline Report (GBR), if attached as a Contract Document
 - i. Plans and Specifications – in these documents the order of precedence shall be:
 - i. Specifications (Divisions 01-17)
 - ii. Plans
 - iii. General Requirements (GR)
 - iv. Standard Drawings and Typical Details
 - j. CONTRACTOR's Bid
2. In the event of a conflict between terms within an individual Contract Document, the conflict shall be resolved by applying the following principles as appears applicable:
 - a. Figured dimensions on the Contract Documents shall govern. Dimensions not specified shall be as directed by the ENGINEER. Details not shown or specified shall be the same as similar parts that are shown or specified, or as

directed. Full-size details shall take precedence over scale Drawings as to shape and details of construction. Specifications shall govern as to material and workmanship.

- b. The Contract Documents calling for the higher quality material or workmanship shall prevail. Materials or Work described in words, which so applied, have a well-known technical or trade meaning shall be deemed to refer to such recognized standards. In the event of any discrepancy between any Drawings and the figures thereon, the figures shall be taken as correct.
- c. Scale Drawings, full-size details, and Specifications are intended to be fully complementary and to agree. Should any discrepancy between Contract Documents come to the CONTRACTOR's attention, or should an error occur in the efforts of others, which affect the Work, the CONTRACTOR shall notify the ENGINEER, in writing, at once. In the event any doubts or questions arise with respect to the true meaning of the Contract Documents, reference shall be made to the ENGINEER whose written decision shall be final. If the CONTRACTOR proceeds with the Work affected without written instructions from the ENGINEER, the CONTRACTOR shall be fully responsible for any resultant damage or defect.
- d. Anything mentioned in the Specifications and not indicated in the Plans, or indicated in the Plans and not mentioned in the Specifications, shall be of like effect as if indicated and mentioned in both. In case of discrepancy in the Plans or Specifications, the matter shall be immediately submitted to OC SAN's ENGINEER, without whose decision CONTRACTOR shall not adjust said discrepancy save only at CONTRACTOR's own risk and expense. The decision of the ENGINEER shall be final.

In all matters relating to the acceptability of material, machinery or plant equipment; classifications of material or Work; the proper execution, progress or sequence of the Work; and quantities interpretation of the Contract Documents, the decision of the ENGINEER shall be final and binding, and shall be a condition precedent to any payment under the Contract, unless otherwise ordered by the Board of Directors.

B. Definitions

Capitalized terms used in this Contract are defined in the General Conditions, "Definitions". Additional terms may be defined in the Special Provisions.

SECTION – 2 MATERIALS AND LABOR

CONTRACTOR shall furnish, under the conditions expressed in the Plans and Specifications, at CONTRACTOR'S own expense, all labor and materials necessary, except such as are mentioned in the Specifications to be furnished by OC SAN, to construct and complete the Project, in good workmanlike and substantial order. If CONTRACTOR fails to pay for labor or materials when due, OC SAN may settle such claims by making demand upon the Surety to this Contract. In the event of the failure or refusal of the Surety to satisfy said claims, OC SAN may settle them directly and deduct the amount of payments from the Contract Price and any amounts due to CONTRACTOR. In the event OC SAN receives a stop payment notice from any laborer or material supplier alleging non-payment by CONTRACTOR, OC SAN shall be entitled to deduct all of its costs and expenses incurred relating thereto, including but not limited to administrative and legal fees.

SECTION – 3 PROJECT

The Project is described as:

PROJECT NO. 2-49

TAFT BRANCH IMPROVEMENTS

SECTION – 4 PLANS AND SPECIFICATIONS

The Work to be done is shown in a set of Plans and Specifications entitled:

PROJECT NO. 2-49

TAFT BRANCH IMPROVEMENTS

Said Plans and Specifications and any revision, amendments and addenda thereto are attached hereto and incorporated herein as part of this Contract and referred to by reference.

SECTION – 5 TIME OF COMMENCEMENT AND COMPLETION

CONTRACTOR agrees to commence the Project within 15 calendar days from the date set forth in the "Notice to Proceed" sent by OC SAN, unless otherwise specified therein and shall diligently prosecute the Work to completion within seven hundred ninety (790) calendar days from the date of the "Notice to Proceed" issued by OC SAN, excluding delays caused or authorized by OC SAN as set forth in Sections 7, 8, and 9 hereof, and applicable provisions in the General Conditions. The time for completion includes thirty (30) calendar days determined by OC SAN likely to be inclement weather when CONTRACTOR will be unable to work. In addition, CONTRACTOR shall accomplish such milestones within the periods of performance set forth in Appendix A of the Special Provisions entitled "Work Completion Schedule."

SECTION – 6 TIME IS OF THE ESSENCE

Time is of the essence of this Contract. As required by the Contract Documents, CONTRACTOR shall prepare and obtain approval of all shop drawings, details and samples, and do all other things necessary and incidental to the prosecution of CONTRACTOR's Work in conformance with an approved construction progress schedule. CONTRACTOR shall coordinate the Work covered by this Contract with that of all other contractors, subcontractors and of OC SAN, in a manner that will facilitate the efficient completion of the entire Work and accomplish the required milestone(s), if any, by the applicable deadline(s) in accordance with Section 5 herein. OC SAN shall have the right to assert complete control of the premises on

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TAFT BRANCH IMPROVEMENTS

which the Work is to be performed and shall have the right to decide the time or order in which the various portions of the Work shall be installed or the priority of the work of subcontractors, and, in general, all matters representing the timely and orderly conduct of the Work of CONTRACTOR on the premises.

SECTION – 7 EXCUSABLE DELAYS

CONTRACTOR shall only be excused for any delay in the prosecution or completion of the Project as specifically provided in General Conditions, “Extension of Time for Delay”, and the General Requirements, “By CONTRACTOR or Others – Unknown Utilities during Contract Work”. Extensions of time and extra compensation arising from such excusable delays will be determined in accordance with the General Conditions, “Extension of Time for Delay” and “Contract Price Adjustments and Payments”, and extensions of time and extra compensation as a result of incurring undisclosed utilities will be determined in accordance with General Requirements, “By CONTRACTOR or Others – Unknown Utilities during Contract Work”. OC SAN’s decision will be conclusive on all parties to this Contract.

SECTION – 8 EXTRA WORK

The Contract Price as set forth in Section 11, includes compensation for all Work performed by CONTRACTOR, unless CONTRACTOR obtains a Change Order signed by a designated representative of OC SAN specifying the exact nature of the Extra Work and the amount of extra compensation to be paid all as more particularly set forth in Section 9 hereof and the General Conditions, “Request for Change (Changes at CONTRACTOR’s Request)”, “OWNER Initiated Changes”, and “Contract Price Adjustments and Payments”.

In the event a Change Order is issued by OC SAN pursuant to the Contract Documents, OC SAN shall extend the time fixed in Section 5 for completion of the Project by the number of days, if any, reasonably required for CONTRACTOR to perform the Extra Work, as determined by OC SAN’s ENGINEER. The decision of the ENGINEER shall be final.

SECTION – 9 CHANGES IN PROJECT

OC SAN may at any time, without notice to any Surety, by Change Order, make any changes in the Work within the general scope of the Contract Document, including but not limited to changes:

1. In the Specifications (including Drawings and designs);
2. In the time, method or manner of performance of the Work;
3. In OC SAN-furnished facilities, equipment, materials, services or site; or
4. Directing acceleration in the performance of the Work.

No change of period of performance or Contract Price, or any other change in the Contract Documents, shall be binding until the Contract is modified by a fully executed Change Order.

All Change Orders shall be issued in accordance with the requirements set forth in the General Conditions, "Request for Change (Changes at CONTRACTOR's Request)" and "OWNER Initiated Changes".

SECTION – 10 LIQUIDATED DAMAGES FOR DELAY

Liquidated Damages shall be payable in the amounts and upon the occurrence of such events or failure to meet such requirements or deadlines as provided in the Special Provisions, "Liquidated Damages and Incentives."

SECTION – 11 CONTRACT PRICE AND METHOD OF PAYMENT

A. OC SAN agrees to pay and the CONTRACTOR agrees to accept as full consideration for the faithful performance of this Contract, subject to any additions or deductions as provided in approved Change Orders, the sum of Twenty Million Four Hundred Fifty-Eight Thousand Two Hundred Fifty Dollars (\$20,458,250) as itemized on the attached Exhibit "A".

Upon satisfaction of the conditions precedent to payment set forth in the General Requirements, Additional General Requirements, and General Conditions (including but not limited to Sections entitled "Mobilization Payment Requirements" and "Payment

Itemized Breakdown of Contract Lump Sum Prices”), there shall be paid to the CONTRACTOR an initial Net Progress Payment for mobilization. OC SAN shall issue at the commencement of the job a schedule which shows:

1. A minimum of one payment to be made to the CONTRACTOR for each successive four (4) week period as the Work progresses, and
2. The due dates for the CONTRACTOR to submit requests for payment to meet the payment schedule.

After the initial Net Progress Payment, and provided the CONTRACTOR submits the request for payment prior to the end of the day required to meet the payment schedule, the CONTRACTOR shall be paid a Net Progress Payment on the corresponding monthly payment date set forth in the schedule.

Payments shall be made on demands drawn in the manner required by law, accompanied by a certificate signed by the ENGINEER, stating that the Work for which payment is demanded has been performed in accordance with the terms of the Contract Documents, and that the amount stated in the certificate is due under the terms of the Contract. Payment applications shall also be accompanied with all documentation, records, and releases as required by the Contract; Exhibit A, Schedule of Prices; and General Conditions, “Payment for Work – General”. The Total amount of Progress Payments shall not exceed the actual value of the Work completed as certified by OC SAN’s ENGINEER. The processing of payments shall not be considered as an acceptance of any part of the Work.

- B. As used in this Section, the following defined terms shall have the following meanings:
1. **“Net Progress Payment”** means a sum equal to the Progress Payment less the Retention Amount and other qualified deductions (Liquidated Damages, stop payment notices, etc.).

2. **“Progress Payment”** means a sum equal to:
 - a. the value of the actual Work completed since the commencement of the Work as determined by OC SAN;
 - b. plus the value of material suitably stored at the worksite, treatment plant or approved storage yards subject to or under the control of OC SAN since the commencement of the Work as determined by OC SAN;
 - c. less all previous Net Progress Payments;
 - d. less all amounts of previously qualified deductions;
 - e. less all amounts previously retained as Retention Amounts.
3. **“Retention Amount”** for each Progress Payment means the percentage of each Progress Payment to be retained by OC SAN to assure satisfactory completion of the Contract. The amount to be retained from each Progress Payment shall be determined as provided in the General Conditions, “Retained Funds; Substitution of Securities.”

SECTION – 12 SUBSTITUTION OF SECURITIES IN LIEU OF RETENTION OF FUNDS

Pursuant to Public Contract Code Section 22300 et seq., the CONTRACTOR may, at its sole expense, substitute securities as provided in General Conditions, “Retained Funds; Substitution of Securities.”

SECTION – 13 COMPLETION

Final Completion and Final Acceptance shall occur at the time and in the manner specified in the General Conditions, “Final Acceptance and Final Completion”, “Final Payment”; and Exhibit A, Schedule of Prices.

Upon receipt of all documentation, records, and releases as required by the Contract from the CONTRACTOR, OC SAN shall proceed with the Final Acceptance as specified in General Conditions.

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SECTION – 14 CONTRACTOR’S EMPLOYEES COMPENSATION

A. Davis-Bacon Act:

CONTRACTOR will pay and will require all Subcontractors to pay all employees on said Project a salary or wage at least equal to the prevailing rate of per diem wages as determined by the Secretary of Labor in accordance with the Davis-Bacon Act for each craft or type of worker needed to perform the Contract. The provisions of the Davis-Bacon Act shall apply only if the Contract is in excess of Two Thousand Dollars (\$2,000.00) and when twenty-five percent (25%) or more of the Contract is funded by federal assistance. If the aforesaid conditions are met, a copy of the provisions of the Davis-Bacon Act to be complied with are incorporated herein as a part of this Contract and referred to by reference.

B. General Prevailing Rate:

OC SAN has been advised by the State of California Director of Industrial Relations of its determination of the general prevailing rate of per diem wages and the general prevailing rate for legal holiday and overtime Work in the locality in which the Work is to be performed for each craft or type of Work needed to execute this Contract, and copies of the same are on file in the Office of the ENGINEER of OC SAN. The CONTRACTOR agrees that not less than said prevailing rates shall be paid to workers employed on this public works Contract as required by Labor Code Section 1774 of the State of California. Per California Labor Code 1773.2, OC SAN will have on file copies of the prevailing rate of per diem wages at its principal office and at each job site, which shall be made available to any interested party upon request.

C. Forfeiture for Violation:

CONTRACTOR shall, as a penalty to OC SAN, forfeit Two Hundred Dollars (\$200.00) for each calendar day or portion thereof for each worker paid (either by the CONTRACTOR or

any Subcontractor under it) less than the prevailing rate of per diem wages as set by the Director of Industrial Relations, in accordance with Sections 1770-1780 of the California Labor Code for the Work provided for in this Contract, all in accordance with Section 1775 of the Labor Code of the State of California.

D. Apprentices:

Sections 1777.5, 1777.6, 1777.7 of the Labor Code of the State of California, regarding the employment of apprentices are applicable to this Contract and the CONTRACTOR shall comply therewith if the prime contract involves Thirty Thousand Dollars (\$30,000.00) or more.

E. Workday:

In the performance of this Contract, not more than eight (8) hours shall constitute a day's work, and the CONTRACTOR shall not require more than eight (8) hours of labor in a day from any person employed by him hereunder except as provided in paragraph (B) above. CONTRACTOR shall conform to Article 3, Chapter 1, Part 7 (Section 1810 et seq.) of the Labor Code of the State of California and shall forfeit to OC SAN as a penalty, the sum of Twenty-five Dollars (\$25.00) for each worker employed in the execution of this Contract by CONTRACTOR or any Subcontractor for each calendar day during which any worker is required or permitted to labor more than eight (8) hours in any one calendar day and forty (40) hours in any one week in violation of said Article. CONTRACTOR shall keep an accurate record showing the name and actual hours worked each calendar day and each calendar week by each worker employed by CONTRACTOR in connection with the Project.

F. Registration; Record of Wages; Inspection:

CONTRACTOR shall comply with the registration requirements of Labor Code Section 1725.5. Pursuant to Labor Code Section 1771.4, the Work is subject to compliance monitoring by the

California Department of Industrial Relations. CONTRACTOR shall maintain accurate payroll records and shall submit payroll records to the Labor Commissioner pursuant to Labor Code Section 1771.4(a)(3). Penalties for non-compliance with the requirements of Section 1776 may be deducted from progress payments per Section 1776.

CONTRACTOR shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations Section 16461(e).

SECTION – 15 SURETY BONDS

CONTRACTOR shall, before entering upon the performance of this Contract, furnish Bonds approved by OC SAN's General Counsel – one in the amount of one hundred percent (100%) of the Contract amount, to guarantee the faithful performance of the Work, and the other in the amount of one hundred percent (100%) of the Contract amount to guarantee payment of all claims for labor and materials furnished. As changes to the Contract occur via approved Change Orders, the CONTRACTOR shall assure that the amounts of the Bonds are adjusted to maintain 100% of the Contract Price. This Contract shall not become effective until such Bonds are supplied to and approved by OC SAN. Bonds must be issued by a Surety authorized by the State Insurance Commissioner to do business in California. The Performance Bond shall remain in full force and effect through the warranty period, as specified in Section 19 below. All Bonds required to be submitted relating to this Contract must comply with California Code of Civil Procedure Section 995.630. Each Bond shall be executed in the name of the Surety insurer under penalty of perjury, or the fact of execution of each Bond shall be duly acknowledged before an officer authorized to take and certify acknowledgments, and either one of the following conditions shall be satisfied:

- A. A copy of the transcript or record of the unrevoked appointment, power of attorney, by-laws, or other instrument, duly certified by the proper authority and attested by the seal of

the insurer entitling or authorizing the person who executed the Bond to do so for and on behalf of the insurer, is on file in the Office of the County Clerk of the County of Orange; or

B. A copy of a valid power of attorney is attached to the Bond.

SECTION – 16 INSURANCE

CONTRACTOR shall purchase and maintain, for the duration of the Contract, insurance against claims for injuries to persons, or damages to property which may arise from or in connection with the performance of the Work hereunder, and the results of that Work by CONTRACTOR, its agents, representatives, employees, or Subcontractors, in amounts equal to the requirements set forth below. CONTRACTOR shall not commence Work under this Contract until all insurance required under this Section is obtained in a form acceptable to OC SAN, nor shall CONTRACTOR allow any Subcontractor to commence Work on a subcontract until all insurance required of the Subcontractor has been obtained. CONTRACTOR shall maintain all of the foregoing insurance coverages in force through the point at which the Work under this Contract is fully completed and accepted by OC SAN pursuant to the provisions of the General Conditions, "Final Acceptance and Final Completion". Furthermore, CONTRACTOR shall maintain all of the foregoing insurance coverages in full force and effect throughout the warranty period, commencing on the date of Final Acceptance. The requirement for carrying the foregoing insurance shall not derogate from the provisions for indemnification of OC SAN by CONTRACTOR under Section 17 of this Contract. Notwithstanding nor diminishing the obligations of CONTRACTOR with respect to the foregoing, CONTRACTOR shall subscribe for and maintain in full force and effect during the life of this Contract, inclusive of all changes to the Contract Documents made in accordance with the provisions of the General Conditions, "Request for Change (Changes at CONTRACTOR's Request)" and/or "OWNER Initiated Changes", the following insurance in amounts not less than the amounts specified. OC SAN

reserves the right to amend the required limits of insurance commensurate with the CONTRACTOR's risk at any time during the course of the Project. No vehicles may enter OC SAN premises/worksites without possessing the required insurance coverage.

CONTRACTOR's insurance shall also comply with all insurance requirements prescribed by agencies from whom permits shall be obtained for the Work and any other third parties from whom third party agreements are necessary to perform the Work (collectively, the "Third Parties"). The Special Provisions may list such requirements and sample forms and requirements from such Third Parties may be included in an attachment to the General Requirements. CONTRACTOR bears the responsibility to discover and comply with all requirements of Third Parties, including meeting specific insurance requirements, that are necessary for the complete performance of the Work. To the extent there is a conflict between the Third Parties' insurance requirements and those set forth by OC SAN herein, the requirement(s) providing the more protective coverage for both OC SAN and the Third Parties shall control and be purchased and maintained by CONTRACTOR.

If CONTRACTOR maintains higher limits than the minimums shown in this Section, OC SAN requires and shall be entitled to coverage for the higher limits maintained by the CONTRACTOR.

Where permitted by law, CONTRACTOR hereby waives all rights of recovery by subrogation because of deductible clauses, inadequacy of limits of any insurance policy, limitations or exclusions of coverage, or any other reason against OC SAN, its or their officers, agents, or employees, and any other contractor or subcontractor performing Work or rendering services on behalf of OC SAN in connection with the planning, development and construction of the Project. In all its insurance coverages (except for Professional Liability/Errors and Omissions coverages, if applicable) related to the Work, CONTRACTOR shall include clauses providing that each

insurer shall waive all of its rights of recovery by subrogation against OC SAN, its or their officers, agents, or employees, or any other contractor or subcontractor performing Work or rendering services at the Project. Where permitted by law, CONTRACTOR shall require similar written express waivers and insurance clauses from each of its Subcontractors of every tier. A waiver of subrogation shall be effective as to any individual or entity, even if such individual or entity (a) would otherwise have a duty of indemnification, contractual or otherwise, (b) did not pay the insurance premium, directly or indirectly, and (c) whether or not such individual or entity has an insurable interest in the property damaged.

A. Limits of Insurance

1. General Liability: Five Million Dollars (\$5,000,000) per occurrence and a general aggregate limit of Ten Million Dollars (\$10,000,000) for bodily injury, personal injury and property damage. If aggregate limits apply separately to this contract (as evidenced by submission of ISO form CG 25 03 or CG 25 04), then the aggregate limit may be equivalent to the per occurrence limit. Coverage shall include each of the following:
 - a. Premises-Operations.
 - b. Products and Completed Operations, with limits of at least Five Million Dollars (\$5,000,000) per occurrence and a general aggregate limit of Ten Million Dollars (\$10,000,000) which shall be in effect at all times during the warranty period set forth in the Warranty section herein, and as set forth in the General Conditions, "Warranty (CONTRACTOR's Guarantee)", plus any additional extension or continuation of time to said warranty period that may be required or authorized by said provisions. If aggregate limits apply separately to this contract (as evidenced by submission of ISO form CG 25 03 or CG 25 04), then the aggregate limit may be equivalent to the per occurrence limit.

- c. Broad Form Property Damage, expressly including damage arising out of explosion, collapse, or underground damage.
- d. Contractual Liability, expressly including the indemnity provisions assumed under this Contract.
- e. Separation of Insured Clause, providing that coverage applies separately to each insured, except with respect to the limits of liability.
- f. Independent CONTRACTOR's Liability.

To the extent first dollar coverage, including defense of any claim, is not available to OC SAN or any other additional insured because of any SIR, deductible, or any other form of self-insurance, CONTRACTOR is obligated to assume responsibility of insurer until the deductible, SIR or other condition of insurer assuming its defense and/or indemnity has been satisfied.

CONTRACTOR shall be responsible to pay any deductible or SIR.

- g. If a crane will be used, the general liability insurance will be endorsed to add Riggers Liability coverage or its equivalent to cover the usage of the crane and exposures with regard to the crane operators, riggers and others involved in using the crane.
 - h. If divers will be used, the general liability insurance will be endorsed to cover marine liability or its equivalent to cover the usage of divers.
2. Automobile Liability: The CONTRACTOR shall maintain a policy of automobile liability insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and other vehicles providing the following minimum limit of liability coverage: combined single limit of Two Million Dollars (\$2,000,000) for bodily injury, personal injury, and property damage.

3. **Umbrella Excess Liability:** The minimum limits of general liability and automobile liability insurance required, as set forth above, shall be provided for either in a single policy of primary insurance or a combination of policies of primary and umbrella excess coverage. Excess liability coverage shall be issued with limits of liability which, when combined with the primary insurance, will equal the minimum limits for general liability and automobile liability.
4. **Drone Liability Insurance:** If a drone will be used, drone liability insurance must be maintained by CONTRACTOR in the amount of One Million Dollars (\$1,000,000) in a form acceptable to OC SAN.
5. **Workers' Compensation/Employer's Liability:** CONTRACTOR shall provide such workers' compensation insurance as required by the Labor Code of the State of California, including employer's liability with a minimum limit of One Million Dollars (\$1,000,000) per accident for bodily injury or disease. If an exposure to Jones Act liability may exist, the insurance required herein shall include coverage with regard to Jones Act claims.
6. **Pollution Liability Insurance:** CONTRACTOR shall purchase and maintain insurance for pollution liability covering bodily injury, property damage (including loss of use of damaged property or property that has not been physically injured or destroyed), cleanup costs, and defense costs (including costs and expenses for investigation, defense, or settlement of claims). Coverage shall carry limits of at least Two Million Dollars (\$2,000,000) and shall apply to sudden and non-sudden pollution conditions (including sewage spills), both at the site or needed due to migration of pollutants from the site, resulting from the escape or release of smoke, vapors, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials, or other irritants, contaminants or pollutants.

If CONTRACTOR provides coverage written on a claims-made basis, OC SAN has the right to approve or reject such coverage in its own discretion. If written on a claims-made basis, the CONTRACTOR warrants that any retroactive date applicable to coverage under the policy precedes the effective date of this Contract, and that continuous coverage will be maintained, or an extended discovery period will be exercised, for a period of two years beginning from the time that the Project under this Contract is completed.

B. Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and approved by OC SAN. At the option of OC SAN, either: the Insurer shall reduce or eliminate such deductibles or self-insured retentions as respects OC SAN, its Directors, officers, agents, consultants, and employees; or CONTRACTOR shall provide a financial guarantee satisfactory to OC SAN guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

C. Other Insurance Provisions

1. Each such policy of general liability insurance and automobile liability insurance shall be endorsed to contain, the following provisions:
 - a. OC SAN, its directors, officers, agents, consultants, and employees, and all public agencies from whom permits will be obtained, and their directors, officers, agents, and employees are hereby declared to be additional insureds under the terms of this policy, but only with respect to the operations of CONTRACTOR at or from any of the sites of OC SAN in connection with this Contract, or acts and omissions of the additional insured in connection with its general supervision or inspection of said operations related to this Contract.

- b. Insurance afforded by the additional insured endorsement shall apply as primary insurance, and other insurance maintained by OC SAN shall be excess only and not contributing with insurance provided under this policy.
2. Cancellation and Policy Change Notice.

The CONTRACTOR is required to notify OC SAN in writing of any insurance cancellation notice it receives or other knowledge of pending or actual insurance policy cancellation within two (2) working days of receipt of such notice or acquisition of such knowledge. Additionally, the CONTRACTOR is required to notify OC SAN in writing of any change in the terms of insurance, including reduction in coverage or increase in deductible/SIR, within two (2) working days of receipt of such notice or knowledge of same.

Said notices shall be mailed to OC SAN at:

ORANGE COUNTY SANITATION DISTRICT
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Contracts, Purchasing & Materials Management Division
3. Coverage shall not extend to any indemnity coverage for the active negligence of any additional insured in any case where an agreement to indemnify the additional insured would be invalid under California Civil Code Section 2782(b).
4. If required by a public agency from whom permit(s) will be obtained, each policy of general liability insurance and automobile liability insurance shall be endorsed to specify by name the public agency and its legislative members, officers, agents, consultants, and employees, to be additional insureds.

D. Acceptability of Insurers

Insurers must have an "A-", or better, Policyholder's Rating, and a Financial Rating of at least Class VIII, or better, in accordance with the most current A.M. Best Rating Guide.

OC SAN recognizes that State Compensation Insurance Fund has withdrawn from participation in the A.M. Best Rating Guide process. Nevertheless, OC SAN will accept State Compensation Insurance Fund for the required policy of worker's compensation insurance, subject to OC SAN's option, at any time during the term of this Contract, to require a change in insurer upon twenty (20) days written notice. Further, OC SAN will require CONTRACTOR to substitute any insurer whose rating drops below the levels herein specified. Said substitution shall occur within twenty (20) days of written notice to CONTRACTOR by OC SAN or its agent.

E. Verification of Coverage

CONTRACTOR shall furnish OC SAN with original certificates and mandatory endorsements affecting coverage. Said policies and endorsements shall conform to the requirements herein stated. All certificates and endorsements are to be received and approved by OC SAN before Work commences. OC SAN reserves the right to require complete, certified copies of all required insurance policies, including endorsements, affecting the coverage required by these Specifications at any time.

F. Subcontractors

CONTRACTOR shall be responsible to establish insurance requirements for any Subcontractors hired by CONTRACTOR. The insurance shall be in amounts and types reasonably sufficient to deal with the risk of loss involving the Subcontractor's operations and work. OC SAN and any public agency issuing permits for the Project must be named as "Additional Insured" on any general liability or automobile liability policy obtained by a Subcontractor. The CONTRACTOR must obtain copies and maintain current versions of all Subcontractors' policies, certificate of liability and mandatory endorsements effecting coverage. Upon request, CONTRACTOR must furnish OC SAN with the above referenced required documents.

G. Required Forms and Endorsements

1. Required ACORD Form

- | | | |
|----|--------------------------|---|
| a. | Certificate of Liability | ACORD Form 25 or other equivalent certificate of insurance form |
|----|--------------------------|---|

2. Required Insurance Services Office, Inc. Endorsements (when alternative forms are shown, they are listed in order of preference)

In the event any of the following forms are cancelled by Insurance Services Office, Inc. (ISO), or are updated, the ISO replacement form or equivalent must be supplied.

- | | | |
|----|---|--|
| a. | Commercial General Liability | Form CG 00 01 |
| b. | Additional Insured Including Products-Completed Operations | Form CG 20 10 and
Form CG 20 37
All other additional insured endorsements must be submitted for approval by OC SAN, and OC SAN may reject alternatives that provide different or less coverage to OC SAN. |
| c. | Waiver of Transfer of Rights of Recovery Against Others to Us/
Waiver of Subrogation | Form CG 24 04 |

3. Required State Compensation Insurance Fund Endorsements

- | | | |
|----|-----------------------|---|
| a. | Waiver of Subrogation | Submit workers' compensation waiver of subrogation endorsement provided by carrier for OC SAN approval. |
| b. | Cancellation Notice | No endorsement is required. However, CONTRACTOR is responsible for notifying OC SAN of any pending or actual insurance policy cancellation, as described in Article C.2., Cancellation and Policy Change Notice, above. |

4. Additional Required Endorsements

- | | | |
|----|------------------------------|------------------------|
| a. | Notice of Policy Termination | Manuscript Endorsement |
|----|------------------------------|------------------------|

5. Pollution Liability Endorsements

There shall be a Separation of Insured Clause or endorsement, providing that coverage applies separately to each insured, except with respect to the limits of liability. There shall also be an endorsement or policy language containing a waiver of subrogation rights on the part of the insurer.

OC SAN, its directors, officers, agents, consultants and employees and all public agencies from whom permits will be obtained as well as their directors, officers, agents, and employees shall be included as insureds under the policy. Any additional insured endorsement shall contain language at least as broad as the coverage language contained in ISO form CG 20 10 or alternatively in both CG 20 10 and CG 20 37 together.

SECTION – 17 RISK AND INDEMNIFICATION

All Work covered by this Contract done at the site of construction or in preparing or delivering materials to the site shall be at the risk of CONTRACTOR alone. CONTRACTOR shall save, indemnify, defend, and keep OC SAN and others harmless as more specifically set forth in General Conditions, "General Indemnification".

SECTION – 18 TERMINATION

This Contract may be terminated in whole or in part in writing by OC SAN in the event of substantial failure by the CONTRACTOR to fulfill its obligations under this Agreement, or it may be terminated by OC SAN for its convenience provided that such termination is effectuated in a manner and upon such conditions set forth more particularly in General Conditions, "Termination for Default" and/or "Termination for Convenience", provided that no termination may be effected unless proper notice is provided to CONTRACTOR at the time and in the manner provided in said General Conditions. If termination for default or convenience is

effected by OC SAN, an equitable adjustment in the price provided for in this Contract shall be made at the time and in the manner provided in the General Conditions, "Termination for Default" and "Termination for Convenience".

SECTION – 19 WARRANTY

The CONTRACTOR agrees to perform all Work under this Contract in accordance with the Contract Documents, including OC SAN's designs, Drawings and Specifications.

The CONTRACTOR guarantees for a period of at least one (1) year from the date of Final Acceptance of the Work, pursuant to the General Conditions, "Final Acceptance and Final Completion" that the completed Work is free from all defects due to faulty materials, equipment or workmanship and that it shall promptly make whatever adjustments or corrections which may be necessary to cure any defects, including repairs of any damage to other parts of the system resulting from such defects. OC SAN shall promptly give notice to the CONTRACTOR of observed defects. In the event that the CONTRACTOR fails to make adjustments, repairs, corrections or other work made necessary by such defects, OC SAN may do so and charge the CONTRACTOR the cost incurred. The CONTRACTOR's warranty shall continue as to any corrected deficiency until the later of (1) the remainder of the original one-year warranty period; or (2) one year after acceptance by OC SAN of the corrected Work. The Performance Bond and the Payment Bond shall remain in full force and effect through the guarantee period.

The CONTRACTOR's obligations under this clause are in addition to the CONTRACTOR's other express or implied assurances under this Contract, including but not limited to specific manufacturer or other extended warranties specified in the Plans and Specifications, or state law and in no way diminish any other rights that OC SAN may have against the CONTRACTOR for faulty materials, equipment or Work.

SECTION – 20 ASSIGNMENT

No assignment by the CONTRACTOR of this Contract or any part hereof, or of funds to be received hereunder, will be recognized by OC SAN unless such assignment has had prior written approval and consent of OC SAN and the Surety.

SECTION – 21 RESOLUTION OF DISPUTES

OC SAN and the CONTRACTOR shall comply with the provisions of California Public Contract Code Section 20104 et. seq., regarding resolution of construction claims for any Claims which arise between the CONTRACTOR and OC SAN, as well as all applicable dispute and Claims provisions as set forth in the General Conditions and as otherwise required by law.

SECTION – 22 SAFETY & HEALTH

CONTRACTOR shall comply with all applicable safety and health requirements mandated by federal, state, city and/or public agency codes, permits, ordinances, regulations, and laws, as well as these Contract Documents, including but not limited to the General Requirements, Section entitled “Safety” and Exhibit B Contractor Safety Standards. OC SAN reserves the right to stop Work for violations of safety and health standards until the hazardous conditions are corrected. The right to stop Work includes the right to remove a contractor or its employees from the worksite.

[THIS SECTION INTENTIONALLY LEFT BLANK]

SECTION – 23 NOTICES

Any notice required or permitted under this Contract shall be served by personal delivery or by certified mail, return receipt requested, at the address set forth below. Unless specified elsewhere in the Contract Documents or otherwise required by law, any notice may alternatively be given by electronic telecommunication to the email address set forth below. Any party whose address changes shall notify the other party in writing.

TO OC SAN: Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, California 92708-7018
Attn: Clerk of the Board
ocsanclerk@ocsan.gov

Copy to: Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, California 92708-7018
Attn: Construction Manager
rcuellar@ocsan.gov

Bradley R. Hogin, Esquire
Woodruff, Spradlin & Smart
555 Anton Boulevard, Suite 1200
Costa Mesa, California 92626
bhogin@woodruff.law

TO CONTRACTOR: Sepehr Sharifi, CEO
Big Ben Inc.
4790 Irvine Boulevard, #105-404
Irvine, CA 92620
Sep@bigbenengineering.com

CONFORMED

C-CA-071223
PROJECT NO. 2-49
TAFT BRANCH IMPROVEMENTS

IN WITNESS WHEREOF, the parties hereto have executed this Contract Agreement as the date first hereinabove written.

CONTRACTOR: Big Ben Inc.
4790 Irvine Boulevard, #105-404
Irvine, CA 92620

By _____ Date _____

Printed Name

Its _____

CONTRACTOR's State License No. 774444 (Expiration Date – 2/28/2026)

OC SAN: Orange County Sanitation District

By _____ Date _____

Chad P. Wanke
Board Chairman

By _____ Date _____

Kelly A. Lore
Clerk of the Board

By _____ Date _____

Ruth Zintzun
Finance & Procurement Manager

EXHIBIT A
SCHEDULE OF PRICES

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EXHIBIT A
SCHEDULE OF PRICES

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EXHIBIT A

SCHEDULE OF PRICES

EXA-1 BASIS OF COMPENSATION

CONTRACTOR will be paid the Contract Price according to the Schedule of Prices, and all other applicable terms and conditions of the Contract Documents.

EXA-2 PROGRESS PAYMENTS

Progress payments will be made in accordance with all applicable terms and conditions of the Contract Documents, including, but not limited to:

1. Contract Agreement – Section 11 – “Contract Price and Method of Payment;”
2. General Conditions – “Payment – General”;
3. General Conditions – “Payment – Applications for Payment”;
4. General Conditions – “Payment – Mobilization Payment Requirements;”
5. General Conditions – “Payment – Itemized Breakdown of Contract Lump Sum Prices”;
6. General Conditions – “Contract Price Adjustments and Payments”;
7. General Conditions – “Suspension of Payments”;
8. General Conditions – “OC SAN’s Right to Withhold Certain Amounts and Make Application Thereof”; and
9. General Conditions – “Final Payment.”

EXA-3 RETENTION AND ESCROW ACCOUNTS

A. Retention:

OC SAN shall retain a percentage of each progress payment to assure satisfactory completion of the Work. The amount to be retained from each progress payment shall be determined as provided in General Conditions – “Retained Funds; Substitution of Securities”. In all contracts between CONTRACTOR and its Subcontractors and/or Suppliers, the retention may not exceed the percentage specified in the Contract Documents.

B. Substitution of Securities:

CONTRACTOR may, at its sole expense, substitute securities as provided in General Conditions – “Retained Funds; Substitution of Securities.” Payment of Escrow Agent:

In lieu of substitution of securities as provided above, the CONTRACTOR may request and OC SAN shall make payment of retention earned directly to the escrow agent at the expense of the CONTRACTOR. At the expense of the CONTRACTOR, the CONTRACTOR may direct the investment of the payments into securities consistent with Government Code §16430 and the CONTRACTOR shall receive the interest earned on the investments upon the same terms provided for in this article for securities deposited by the CONTRACTOR. Upon satisfactory completion of the Contract, the CONTRACTOR shall receive from the escrow agent all securities, interest and payments received by the escrow agent from OC SAN, pursuant to the terms of this article. The CONTRACTOR shall pay to each Subcontractor, not later than twenty (20) calendar days after receipt of the payment, the respective amount of interest earned, net of costs attributed to retention withheld from each Subcontractor, on the amount of retention withheld to ensure the performance of the Subcontractor. The escrow agreement used by the escrow agent pursuant to this article shall be substantially similar to the form set forth in §22300 of the California Public Contract Code.

C. Release of Retention:

Upon Final Acceptance of the Work, the CONTRACTOR shall submit an invoice for release of retention in accordance with the terms of the Contract.

D. Additional Deductibles:

In addition to the retentions described above, OC SAN may deduct from each progress payment any or all of the following:

1. Liquidated Damages that have occurred as of the date of the application for progress payment;
2. Deductions from previous progress payments already paid, due to OC SAN's discovery of deficiencies in the Work or non-compliance with the Specifications or any other requirement of the Contract;
3. Sums expended by OC SAN in performing any of the CONTRACTOR'S obligations under the Contract that the CONTRACTOR has failed to perform, and;
4. Other sums that OC SAN is entitled to recover from the CONTRACTOR under the terms of the Contract, including without limitation insurance deductibles and assessments.

The failure of OC SAN to deduct any of the above-identified sums from a progress payment shall not constitute a waiver of OC SAN's right to such sums or to deduct them from a later progress payment.

EXA-4 STOP PAYMENT NOTICE

In addition to other amounts properly withheld under this article or under other provisions of the Contract, OC SAN shall retain from progress payments otherwise due the CONTRACTOR an amount equal to one hundred twenty-five percent (125%) of the amount claimed under any stop payment notice under Civil Code §9350 et. seq. or other lien filed against the CONTRACTOR for labor, materials, supplies, equipment, and any other thing of value claimed to have been furnished to and/or incorporated into the Work; or for any other alleged contribution thereto. In addition to the foregoing and in accordance with Civil Code §9358 OC SAN may also satisfy its duty to withhold funds for stop payment notices by refusing to release funds held in escrow pursuant to public receipt of a release of stop payment notice executed by a stop payment notice claimant, a stop payment notice release bond, an order of a court of competent jurisdiction, or other evidence satisfactory to OC SAN that the CONTRACTOR has resolved such claim by settlement.

EXA-5 PAYMENT TO SUBCONTRACTORS

Requirements

1. The CONTRACTOR shall pay all Subcontractors for and on account of Work performed by such Subcontractors, not later than seven (7) days after receipt of each progress payment as required by the California Business and Professions Code §7108.5. Such payments to Subcontractors shall be based on the measurements and estimates made pursuant to article progress payments provided herein.
2. Except as specifically provided by law, the CONTRACTOR shall pay all Subcontractors any and all retention due and owing for and on account of Work performed by such Subcontractors not later than seven (7) days after CONTRACTOR'S receipt of said retention proceeds from OC SAN as required by the California Public Contract Code §7107.

EXA-6 PAYMENT OF TAXES

Unless otherwise specifically provided in this Contract, the Contract Price includes full compensation to the CONTRACTOR for all taxes. The CONTRACTOR shall pay all federal, state, and local taxes, and duties applicable to and assessable against any Work, including but not limited to retail sales and use, transportation, export, import, business, and special taxes. The CONTRACTOR shall ascertain and pay the taxes when due. The CONTRACTOR will maintain auditable records, subject to OC SAN reviews, confirming that tax payments are current at all times.

EXA-7 FINAL PAYMENT

After Final Acceptance of the Work, as more particularly set forth in the General Conditions, "Final Acceptance and Final Completion", and after Resolution of the Board authorizing final payment and satisfaction of the requirements as more particularly set forth in General Conditions – "Final Payment", a final payment will be made as follows:

1. Prior to Final Acceptance, the CONTRACTOR shall prepare and submit an application for Final Payment to OC SAN, including:
 - a. The proposed total amount due the CONTRACTOR, segregated by items on the payment schedule, amendments, Change Orders, and other bases for payment;
 - b. Deductions for prior progress payments;
 - c. Amounts retained;
 - d. A conditional waiver and release on final payment for each Subcontractor (per Civil Code Section 8136);
 - e. A conditional waiver and release on final payment on behalf of the CONTRACTOR (per Civil Code Section 8136);
 - f. List of Claims the CONTRACTOR intends to file at that time or a statement that no Claims will be filed,
 - g. List of pending unsettled claims, stating claimed amounts, and copies of any and all complaints and/or demands for arbitration received by the CONTRACTOR; and
 - h. For each and every claim that resulted in litigation or arbitration which the CONTRACTOR has settled, a conformed copy of the Request for Dismissal with prejudice or other satisfactory evidence the arbitration is resolved.
2. The application for Final Payment shall include complete and legally effective releases or waivers of liens and stop payment notices satisfactory to OC SAN, arising out of or filed in connection with the Work. Prior progress payments shall be subject to correction in OC SAN's review of the application for Final Payment. Claims filed with the application for Final Payment must be otherwise timely under the Contract and applicable law.
3. Within a reasonable time, OC SAN will review the CONTRACTOR'S application for Final Payment. Any recommended changes or corrections will then be forwarded to the CONTRACTOR. Within ten (10) calendar days after receipt of recommended changes from OC SAN, the CONTRACTOR will make the changes, or list Claims that will be filed as a result of the

changes, and shall submit the revised application for Final Payment. Upon acceptance by OC SAN, the revised application for Final Payment will become the approved application for Final Payment.

4. If no Claims have been filed with the initial or any revised application for Final Payment, and no Claims remain unsettled within thirty-five (35) calendar days after Final Acceptance of the Work by OC SAN, and agreements are reached on all issues regarding the application for Final Payment, OC SAN, in exchange for an executed release, satisfactory in form and substance to OC SAN, will pay the entire sum found due on the approved application for Final Payment, including the amount, if any, allowed on settled Claims.
5. The release from the CONTRACTOR shall be from any and all Claims arising under the Contract, except for Claims that with the concurrence of OC SAN are specifically reserved, and shall release and waive all unreserved Claims against OC SAN and its officers, directors, employees and authorized representatives. The release shall be accompanied by a certification by the CONTRACTOR that:
 - a. It has resolved all Subcontractors, Suppliers and other Claims that are related to the settled Claims included in the Final Payment;
 - b. It has no reason to believe that any party has a valid claim against the CONTRACTOR or OC SAN which has not been communicated in writing by the CONTRACTOR to OC SAN as of the date of the certificate;
 - c. All warranties are in full force and effect, and;
 - d. The releases and the warranties shall survive Final Payment.
6. If any claims remain open, OC SAN may make Final Payment subject to resolution of those claims. OC SAN may withhold from the Final Payment an amount not to exceed one hundred fifty percent (150%) of the sum of the amounts of the open claims, and one hundred twenty-five percent (125%) of the amounts of open stop payment notices referred to in article entitled stop payment notices herein.
7. The CONTRACTOR shall provide an unconditional waiver and release on final payment from each Subcontractor and Supplier providing Work under the Contract (per Civil Code Section 8138) and an unconditional waiver and release on final payment on behalf of the CONTRACTOR (per Civil Code Section 8138) within thirty (30) days of receipt of Final Payment.

EXA-8 DISCOVERY OF DEFICIENCIES BEFORE AND AFTER FINAL PAYMENT

Notwithstanding OC SAN's acceptance of the application for Final Payment and irrespective of whether it is before or after Final Payment has been made, OC SAN shall not be precluded from subsequently showing that:

1. The true and correct amount payable for the Work is different from that previously accepted;
2. The previously accepted Work did not in fact conform to the Contract requirements, or;
3. A previous payment or portion thereof for Work was improperly made.

OC SAN also shall not be stopped from demanding and recovering damages from the CONTRACTOR, as appropriate, under any of the foregoing circumstances as permitted under the Contract or applicable law.

ATTACHMENT 1 – CERTIFICATION FOR REQUEST FOR PAYMENT

I hereby certify under penalty of perjury as follows:

That the claim for payment is in all respects true, correct; that the services mentioned herein were actually rendered and/or supplies delivered to OC SAN in accordance with the Contract.

I understand that it is a violation of both the federal and California False Claims Acts to knowingly present or cause to be presented to OC SAN a false claim for payment or approval.

A claim includes a demand or request for money. It is also a violation of the False Claims Acts to knowingly make use of a false record or statement to get a false claim paid. The term "knowingly" includes either actual knowledge of the information, deliberate ignorance of the truth or falsity of the information, or reckless disregard for the truth or falsity of the information. Proof of specific intent to defraud is not necessary under the False Claims Acts. I understand that the penalties under the Federal False Claims Act and State of California False Claims Act are non-exclusive, and are in addition to any other remedies which OC SAN may have either under contract or law.

I hereby further certify, to the best of my knowledge and belief, that:

1. The amounts requested are only for performance in accordance with the Specifications, terms, and conditions of the Contract;
2. Payments to Subcontractors and Suppliers have been made from previous payments received under the Contract, and timely payments will be made from the proceeds of the payment covered by this certification;
3. This request for progress payments does not include any amounts which the prime CONTRACTOR intends to withhold or retain from a Subcontractor or Supplier in accordance with the terms and conditions of the subcontract; and
4. This certification is not to be construed as Final Acceptance of a Subcontractor's performance.

Name

Title

Date

CONFORMED

C-EXA-062221
PROJECT NO. 2-49
TAFT BRANCH IMPROVEMENTS

ATTACHMENT 2 – SCHEDULE OF PRICES

See next pages from the Bid Submittal Forms (Big Ben Inc.)

BF-14 Schedule of Prices, Pages 1-3

Bid Submitted By: Big Ben Inc.
(Name of Firm)

BF-14 SCHEDULE OF PRICES

INSTRUCTIONS

A. General

For Unit Prices, it is understood that the following quantities are approximate only and are solely for the purpose of estimating the comparison of Bids, and that the actual value of Work will be computed based upon the actual quantities in the completed Work, whether they be more or less than those shown. CONTRACTOR's compensation for the Work under the Contract Documents will be computed based upon the lump sum amount of the Contract at time of award, plus any additional or deleted costs approved by OC SAN via approved Change Orders, pursuant to the Contract Documents.

Bidder shall separately price and accurately reflect costs associated with each line item, leaving no blanks. Any and all modifications to the Bid must be initialed by an authorized representative of the Bidder in accordance with the Instructions to Bidders, Preparation of Bid.

Bidders are reminded of Instruction to Bidders, Discrepancy in Bid Items, which, in summary, provides that the total price for each item shall be based on the Unit Price listed for each item multiplied by the quantity; and the correct Total Price for each item shall be totaled to determine the Total Amount of Bid.

All applicable costs including overhead and profit shall be reflected in the respective unit costs and the TOTAL AMOUNT OF BID. The Bid price shall include all costs to complete the Work, including profit, overhead, etc., unless otherwise specified in the Contract Documents. All applicable sales taxes, state and/or federal, and any other special taxes, patent rights or royalties shall be included in the prices quoted in this Bid.

B. Basis of Award

AWARD OF THE CONTRACT WILL BE MADE ON THE BASIS OF THE LOWEST RESPONSIVE AND RESPONSIBLE BID.

Note 1: Base Bid. Includes all costs necessary to furnish all labor, materials, equipment and services for the construction of the Project per the Contract Documents.

Bid Submitted By: Big Ben Inc.
(Name of Firm)

SCHEDULE OF PRICES

BASE BID ITEMS (Refer to Note 1 in the Instructions):

Item No.	Description	Unit of Measurement	Approx Qty		Unit Price		Total Price
1.	Mobilization: as described in Division 01, Section 01155 Measurement and Payment and in conformance with the Contract Documents for the lump sum price of...	Lump Sum				=	\$ 700,000
2.	Shoring and Bracing: Furnish all labor, equipment and materials necessary to provide sheeting, shoring and bracing for protection of life and limb in trenches, open excavations and confined spaces, and as described in Division 01, Section 01155 Measurement and Payment and in conformance with the Contract Documents for the lump sum price of...	Lump Sum				=	\$ 750,000
3.	Final Grind and Cap AC Pavement: Furnish all labor, equipment and materials necessary to provide AC grind and overlay, and as described in Division 01, Section 01155 Measurement and Payment and in conformance with the Contract Documents for the lump sum price of...	Square Feet	375,000	x	3.91	=	\$ 1,467,487.66
4.	All Other Portions of the Work: except for Bid Items 1 through 3 and 5, all other portions of the Work set forth in the Contract Documents and as described in Division 01, Section 01155 Measurement and Payment and in conformance with the Contract Documents for the lump sum price of...	Lump Sum				=	\$ 17,042,000

Bid Submitted By: Big Ben Inc.
(Name of Firm)

SCHEDULE OF PRICES
(continued)

Item No.	Description	Unit of Measurement	Approx Qty	Unit Price	Total Price
5.	Permit and Inspection Fees: Fees for all permits and City inspection as described in Division 01, Section 01155 Measurement and Payment and in conformance with the Contract Documents for the lump sum price of...	Allowance			= \$ 300,000
6.	Demobilization: including final progress payment, clean-up and restoration of the project site as described in Division 01, Section 01155 Measurement and Payment and in conformance with the Contract Documents for a lump sum price of...	Lump Sum			= \$ 200,000

TOTAL AMOUNT OF BID (BASIS OF AWARD)

\$ 20,459,487.66

RECORDING REQUESTED
BY AND RETURN TO:

ORANGE COUNTY SANITATION DISTRICT
P. O. Box 8127
Fountain Valley, CA 92728
Attn: Clerk of the Board

(Space Above This Line for Recorder's Use)

Exempt from recording fee – California Government Code Section 6103 and 27383

**SEWER TRANSFER AGREEMENT
BETWEEN
ORANGE COUNTY SANITATION DISTRICT
AND THE
CITY OF ORANGE**

THIS AGREEMENT for the transfer of certain sewer's and appurtenant facilities (hereafter, "Agreement") is made and entered into this _____ day of _____, 2024 by and between Orange County Sanitation District, a special district and public corporation, ("OCSAN") and the City of Orange, a municipal corporation ("CITY). OCSAN and CITY together are referred to as the "PARTIES."

Whereas, OCSAN is a regional operator of sewage collection and sewage treatment facilities, which owns and operates, among other facilities, regional sewage collection facilities, including trunk sewer pipelines as large as 108 inches in diameter.

Whereas, CITY operates a local sewage collection system, which collects sewage from properties within its jurisdiction and then transfers it to OCSAN via connection to OCSAN's regional sewage collection and treatment facilities.

Whereas, OCSAN is engaged in Project No. 2-49 to improve its facilities in the CITY that run west along Meats Avenue from Santiago Blvd. across the 55 Freeway then south along Tustin Street then west along Taft Avenue (the "Taft Branch Improvements"). The Taft Branch Improvements will cause the abandonment of the portion of OCSAN's facilities along Meats Avenue crossing the 55 Freeway and realigning them south along N. Sacramento Street to Taft Avenue.

Whereas, in connection with OCSAN's Taft Branch Improvements, the PARTIES agree to transfer to CITY OCSAN's sewer facilities along Meats west of the 55 Freeway then south on Tustin Street to its first intersection with Taft Avenue as further described below; and to transfer to OCSAN the CITY's sewer facilities along Taft Avenue from Santiago Blvd., west to N. Sacramento Street as further described below.

Whereas, in conjunction with the OCSAN's Taft Branch Improvements, OCSAN will construct new facilities to be transferred to the CITY and will modify existing CITY facilities to convey flow from existing CITY facilities to OCSAN's newly constructed regional facilities as further described below.

Whereas, this Agreement shall document and memorialize the understanding of the PARTIES pertaining to the existing property and that to be constructed by OCSAN and transferred between OCSAN and CITY.

NOW THEREFORE BE IT RESOLVED that the PARTIES agree as follows:

1. OCSAN Grant of Property Rights in Sewer Pipelines to CITY

(a) Existing sewer lines/FOG Control Program Transfer Area.

- (1) Effective Date of Transfer ("Transfer Date"). Effective upon OCSAN's acceptance of the Taft Branch Improvements, the date thereof being established as of the filing with the Orange County Clerk-Recorder a Notice of Completion thereof, OCSAN

does hereby quitclaim, grant, convey and transfer to CITY all existing sewer lines and appurtenant sewer facilities covered by this Agreement owned by OCSAN (collectively, "OCSAN Property"), which OCSAN Property is described and depicted in Exhibit "A" and shown visually in Exhibit B, attached hereto. In the event of an apparent discrepancy between Exhibit "A" and Exhibit "B", Exhibit "A" shall control. This sewer segment shall further be known as the "FOG Control Program Transfer Area."

- (2) Transfer of FOG Control Program Responsibility. Upon the effective date of the transfer of the FOG Control Program Transfer Area, CITY accepts ownership and all maintenance responsibilities of the FOG Control Program Transfer Area sewer lines and appurtenant sewer facilities, including all related regulatory activities that include, but is not limited to, Fats, Oils, and Grease (FOG) Wastewater Discharge regulation and monitoring requirements pursuant to the State Water Resources Control Board's Order WQ 2022-0103-DWQ, and its successors. OCSAN's responsibility for FOG Permits and FOG Wastewater Discharge regulation within the FOG Control Program Transfer Area will cease.

- (3) FOG Permittees. Thirty (30) days prior to the transfer date of the FOG Control Program Transfer Area, OSCAN will:

- a. Inform all FOG Permittees within the FOG Control Program Transfer Area of the transfer of the sewer lines and transfer of the FOG control program authority and responsibility to CITY; and
- b. Provide the CITY a list of all valid FOG Permittees and known Food Service Establishments located in the FOG Control Program Transfer Area; and
- c. Transfer all FOG Permittee records to the CITY.

- (b) Sewer line segments to be constructed by OCSAN and transferred to CITY. Subject to the construction conditions set forth below, OCSAN does hereby quitclaim, grant, convey and transfer to CITY all sewer lines and appurtenant sewer facilities to be constructed by OCSAN pursuant to this Agreement (collectively, "Added Property"), which Added Property is described and depicted in Exhibit "C" and shown visually in Exhibit D, attached hereto. In the event of an apparent discrepancy between Exhibit "C" and Exhibit "D", Exhibit "C" shall control. Upon the effective date of the transfer of the Added Property, CITY accepts ownership and all maintenance responsibilities of the Added Property sewer lines and appurtenant sewer facilities, including all related regulatory activities that include, but is not limited to, Fats, Oils, and Grease (FOG) Wastewater Discharge regulation and monitoring requirements pursuant to the State Water Resources Control Board's Order WQ 2022-0103-DWQ, and its successors.

- (1) OCSAN shall construct the Added Property at no cost to CITY, and shall:

- a. Be responsible for the design, construction, costs, and all acts necessary or required in order to complete the construction of the Added Property. OCSAN will remove its name from manhole covers for the existing OCSAN Property transferred to CITY.
- b. Submit the design, plans and specifications for the Added Property work to CITY's City Engineer for review and approval.
- c. Ensure that the Added Property construction is completed in compliance with CITY's approved plans and specifications.

(2) In conjunction with OCSAN's construction of the Added Property, CITY shall:

- a. Cooperate with OCSAN and promptly and expeditiously review and provide approvals or comments regarding the design, plans and specifications for the Added Property to be included in bidding documents prepared for the Added Property in connection with the Taft Branch Improvements, including plans and specifications. CITY shall further issue any permits at no cost to OCSAN or its construction contractor. OCSAN shall not commence the Added Property construction work until the CITY has approved the plans and specifications for the work and issued the required permits therefor. CITY shall not have the right to request additional changes to the project approved for bidding, but CITY shall have the right to approve change orders during construction for changes to the approved plans required by site conditions unknown prior to construction.
- b. At all times, during the progress of construction of the Added Property, have access to the work site for the purpose of inspection thereof.
- c. Promptly notify OCSAN in writing should CITY deem any remedial measures to be reasonably necessary prior to OCSAN's acceptance of any work on the Added Property.
- d. Promptly notify OCSAN of CITY's acceptance/approval or rejection of the Added Property work within thirty (30) days after receiving notice from OCSAN that construction is complete. CITY shall accept and be deemed to accept/approve of the work if CITY fails to provide notice to OCSAN within thirty (30) days of OCSAN's notice of completion of construction to CITY.

(3) Effective Date of Transfer of Added Property. The Added Property shall be deemed transferred as of the date of CITY's acceptance or deemed acceptance pursuant to subdivision (1)(b)(2)(d) above.

2. CITY Grant of Property Rights in Sewer Pipelines to OCSAN

Effective as of the Transfer Date defined in Section (1)(a)(1) above, CITY does hereby quitclaim, grant, convey and transfer to OCSAN all sewer lines and appurtenant sewer facilities covered by this Agreement (collectively, "CITY Property") owned by CITY, which CITY Property is described and depicted in Exhibit "E" and shown visually in Exhibit F, attached hereto. In the event of an apparent discrepancy between Exhibit "E" and Exhibit "F", Exhibit "E" shall control.

3. Warranty of Condition

OCSAN and CITY make no warranty as to the condition and remaining life of the sewer lines to be transferred between the Parties hereby, except that OCSAN shall transfer any warranty applicable to the Added Property upon acceptance by CITY thereof. The PARTIES will further transfer and exchange all plans, reports and/or studies pertaining to the facilities being transferred, which are in the possession of each PARTY pertaining to the existing facilities being transferred hereunder.

4. Responsibility for Operations and Maintenance

- A. Upon completion of the transfer of the OCSAN Property, Added Property, and CITY Property, each PARTY shall be responsible for the operation and maintenance of the facilities herein acquired, including compliance with all State and local regulations thereto, which includes the implementation of a sewer system management plan and a Fats, Oil and Grease program. For ease of reference, the existing parcels connected to the sewer facilities being transferred to CITY as OCSAN Property and Added Property, for which

CITY will have operations and maintenance responsibility are shown in Exhibit "G", attached hereto.

- B. Along segments where the Parties' sewer mains run parallel in proximity with each other, OCSAN's sewer main facilities are constructed deeper than the City's main sewer facilities. OCSAN shall be liable for any damage to the City's sewer facilities caused by OCSAN during any repair or maintenance of OCSAN's facilities.

5. Risk Transfer and Indemnity

- (a) Risk Transfer. OCSAN and CITY, and each of their elected officials, officers, employees and agents, shall be named as additional insureds in all construction contracts in all commercial general and automobile liability insurance policies relating to the Added Property construction; and each shall be indemnified and be held harmless for any liability arising out of contractors' performance thereunder.
- (b) OCSAN Indemnity. Neither OCSAN, nor any officer, agent, representative, or employee thereof, shall be responsible for any damage or liability occurring by reason of anything done or omitted to be done by CITY, its officers, employees, agents, contractors, or subcontractors, under or in connection with any work, authority, or jurisdiction delegated to CITY under this Agreement. To the fullest extent permitted by law, CITY shall defend, indemnify and hold harmless OCSAN, including OCSAN's employees, agents, representatives, and officials, from any liabilities, claims, suits, actions, arbitration proceedings, administrative proceedings, regulatory proceedings, losses, costs or expenses of any kind whatsoever, whether actual, alleged, or threatened, without restriction or limitation, and incurred in relation to, as a consequence of, arising out of or in any way attributable actually, allegedly or impliedly, to the negligence, recklessness, or willful misconduct of CITY and its officers, employees, agents, contractors, or subcontractors, in the performance of this Agreement. All obligations under this provision are to be paid by CITY as they are incurred by OCSAN.
- (c) City Indemnity. Neither CITY, nor any officer, agent, representative or employee thereof, shall be responsible for any damage or liability occurring by reason of anything done or omitted to be done by OCSAN, its officers, employees, agents, contractors, or subcontractors, under or in connection with any work, authority, or jurisdiction delegated to OCSAN under this Agreement. To the fullest extent permitted by law, OCSAN shall defend, indemnify and hold harmless City, including CITY's employees, agents, representatives, and officials, from any liabilities, claims, suits, actions, arbitration proceedings, administrative proceedings, regulatory proceedings, losses, costs or expenses of any kind whatsoever, whether actual, alleged, or threatened, without restriction or limitation, and incurred in relation to, as a consequence of, arising out of or in any way attributable actually, allegedly or impliedly, to the negligence, recklessness, or willful misconduct of OCSAN and its officers, employees, agents, contractors, or subcontractors, in the performance of this Agreement. All obligations under this provision are to be paid by OCSAN as they are incurred by CITY. OCSAN shall require in any agreement with a contractor for the project that the contractor defend, indemnify and hold harmless CITY, including CITY's officers, employees, agents, contractors, and subcontractors, as set forth in this provision.
- (d) Cooperation. In the event any claim or action is brought against the PARTIES relating to the performance rendered under this Agreement, the PARTIES shall render any reasonable assistance and cooperation which each might require.

6. Resolution of Disputes

In the event of any dispute concerning any aspect of this Agreement, the PARTIES' representatives shall work in good faith to resolve any such dispute to each PARTY's satisfaction

prior to initiation of any court action, provided, however, that nothing herein shall prevent either PARTY from utilizing all remedies at law or equity in the event such dispute cannot be resolved within thirty (30) days of a written request by one PARTY to meet and confer with the other to resolve such dispute, or such other period of time as agreed upon in writing.

7. Assignment

The benefits and burdens of this Agreement shall be binding upon and inure to all successors-in-interests and assigns of the Parties.

8. Amendment

Any amendment of this Agreement must be in writing, signed, and acknowledged by the OCSAN and CITY and duly recorded in the Official Records of the County Recorder of the County of Orange, State of California.

9. Entire Agreement

This Agreement (including any attached exhibits) contains the entire agreement between OCSAN and CITY regarding the subject matter of the Agreement, including all representations and warranties between them.

10. Notices

Notices relating to this Agreement must be in writing and sent to the addresses set forth below. A Party may change its address for notices by giving notice as required by this Section. A written notice will be considered given (i) when personally delivered, or (ii) two business days after deposit in the United States Mail as first-class mail, certified or registered, return receipt requested with postage prepaid, or (iii) one business day after deposit with a reputable overnight delivery service for next business day delivery, or (iv) on the business day of successful transmission by electronic e-mail. The Parties' addresses for notices are as follows:

To OCSAN: OC San
 Attn: General Manager
 10844 Ellis Avenue
 Fountain Valley, CA 92708
 E-mail: rthompson@ocsan.gov

To CITY: City of Orange
 Attn: City Manager
 300 E. Chapman Avenue
 Orange, CA 92866
 E-mail: tkisela@cityoforange.org

11. No Waiver

No waiver or failure to exercise any right, option, or privilege under the terms of this Agreement on any occasion shall be construed to be a waiver of any other right, option, or privilege on any other occasion.

12. No Third-Party Beneficiaries

This Agreement is entered into by and for OCSAN and CITY, and nothing herein is intended to establish rights or interests in individuals or entities not a party hereto.

13. Severability

If any provision of this Agreement is determined by a court of competent jurisdiction to be unenforceable in any circumstance, such determination shall not affect the validity or enforceability of the remaining terms and provisions hereof or of the offending provision in any other circumstance. Notwithstanding the foregoing, if the value of this Agreement, based upon the substantial benefit of the bargain for any party, is materially impaired, which determination made by the presiding court or arbitrator of competent jurisdiction shall be binding, then both parties agree to substitute such provision(s) through good faith negotiations.

14. Authority

Each Party warrants that the individuals who have signed this Agreement on their behalf have the legal power, right and authority to make this Agreement and bind each respective Party.

Exhibit:

A—Description of OCSAN Property to be transferred to CITY

B—Depiction of OCSAN Property to be transferred to CITY

C—Description of Added Property constructed by OCSAN to be transferred to CITY

D—Description of Added Property construction by OCSA to be transferred to CITY

E—Description of CITY Property to be transferred to OCSAN

F—Depiction of CITY Property to be transferred to OCSAN

G—Properties tied to facilities subject to CITY operation and maintenance responsibility after transfer.

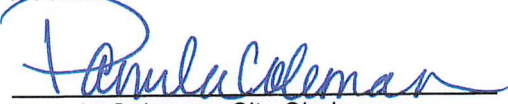
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[Signatures on the following page.]

IN WITNESS WHEREOF, this Agreement has been executed by the Parties hereto.

ATTEST:

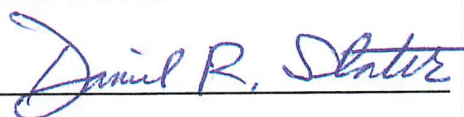

Pamela Coleman, City Clerk

Date: 3/8/24

APPROVED AS TO FORM:


Nathalie Adourian
Senior Assistant City Attorney

CITY OF ORANGE

By: 

Printed Name: Daniel R. Slater

Title: Mayor

Date: 3/8/2024

ORANGE COUNTY SANITATION DISTRICT

By: _____

Printed Name: Chad P. Wanke

Title: Chair of the Board of Directors

Date: _____

ATTEST:

By: _____
Clerk of the Board

Date: _____

APPROVED AS TO FORM

Brad Hogin
General Counsel

✓

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

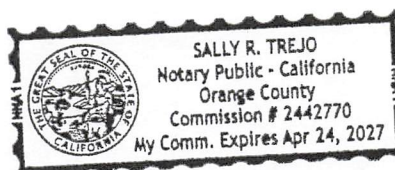
STATE OF CALIFORNIA)
) §
COUNTY OF ORANGE)

On March 8, 2024, before me, Sally R. Trejo a Notary Public, personally appeared Daniel R. Slater who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(ies), and that by his/~~her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct

WITNESS my hand and official seal.

Sally R. Trejo
Signature of Notary Public



(Seal)

EXHIBITS

DISCLAIMER: Maps prepared by the Orange County Sanitation District. The maps are intended for graphical representation only. No level of accuracy is claimed. Portions of this derived product contain geographical information copyrighted by TomTom®. All Rights Reserved.

Exhibit A - Description of OCSAN Property to be Transferred to CITY

Pipelines				
Street	Downstream	Upstream	Existing Diameter (inches)	Length (feet) ¹
Taft Ave and Tustin St	SAR0250-0159	SAR0250-0165	15	75
Tustin St	City MH5	SAR0250-0173	18	497
Tustin St	SAR0250-0173	SAR0250-0175	18	135
Tustin St	SAR0250-0175	SAR0250-0177	18	95
Tustin St	SAR0250-0177	SAR0250-0182	18	388
Tustin St	SAR0250-0182	SAR0250-0185	18	149*
Tustin St	SAR0250-0185	SAR0250-0190	18	117
Tustin St	SAR0250-0190	SAR0250-0195	18	197*
Tustin St	SAR0250-0195	SAR0250-0200	18	175*
Tustin St	SAR0250-0200	SAR0250-0205	18	188*
Meats Ave	SAR0250-0205	SAR0250-0210	12	130
Meats Ave	SAR0250-0210	SAR0250-0215	12	104
Meats Ave	SAR0250-0215	SAR0250-0220	12	92
Meats Ave	SAR0250-0220	SAR0250-0225	12	347

¹ Lengths were determined from CCTV reports; *indicates that the lengths were verified using the as-built information

Exhibit A - Description of OCSAN Property to be Transferred to CITY

Manholes		
Street	Manhole ID	Connection Permit
Taft Ave and Tustin St	SAR0250-0165	T02-00427
Tustin Ave	SAR0250-0173	-
Tustin Ave	SAR0250-0175	T02-00149
Tustin Ave	SAR0250-0177	T02-01451
Tustin Ave	SAR0250-0182	T02-00310
Tustin Ave	SAR0250-0185	T02-01033
Tustin Ave	SAR0250-0190	-
Tustin Ave	SAR0250-0195	T02-01100
Tustin Ave	SAR0250-0200	-
Meats Ave	SAR0250-0205	T02-02336
Meats Ave	SAR0250-0210	-
Meats Ave	SAR0250-0215	-
Meats Ave	SAR0250-0220	-
Meats Ave	SAR0250-0225	T02-00881

Exhibit B - Depiction of OCSAN Property to be Transferred to CITY

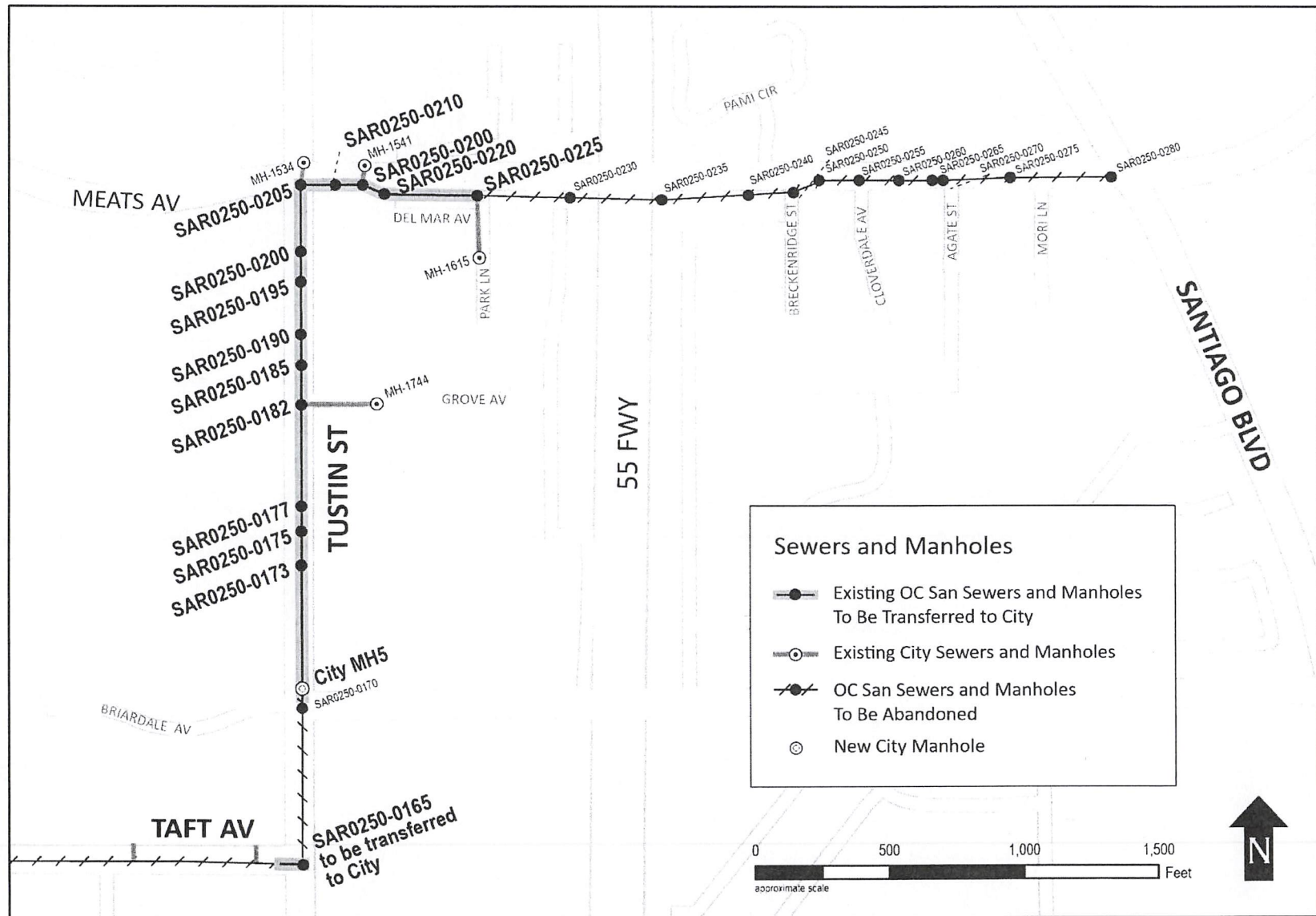


Exhibit C - Description of Added Property Constructed by OCSAN to be Transferred to CITY

Pipelines				
Street	Plan Sheet	Downstream MH	Upstream MH	Diameter (inches)
Taft Ave	C1001	SAR0250-0086	City MH (ID UNK)	8
Taft Ave/Cambridge Ave	C1003	SAR0250-0121	MH-2187	8
Taft Ave/Cambridge Ave	C1003	SAR0250-0121	City MH1	8
Taft Ave/Green Grove St	C1005	SAR0250-0141	MH-2147	8
Taft Ave/Green Grove St	C1005	SAR0250-0141	City MH2	8
Tustin St/E. Taft Ave	C1008	SAR0250-0168	City MH5	18
Meats Ave w/o Breckenridge St	C1012	City MH6	MH-1549	8
Meats Ave	C1012	SAR0250-0445	City MH6	8

Manholes		
Street	Plan Sheet	Manhole
Taft Ave / Cambridge Ave	C1003	City MH1
Taft Ave / Green Grove St	C1005	City MH2
Taft Ave / East of Nordic Dr	C1006	City MH3
Taft Ave / West of Tustin St	C1007	City MH4
Tustin St / E. Taft Ave	C1008	City MH5
Taft Ave w/o Highland St	C1008	City MH7
Tustin St w/o Highland St	C1009	City MH8
Tustin St w/o Breckenridge St	C1012	City MH6

Exhibit D - Depiction of Added Property Constructed by OCSAN to be Transferred to CITY

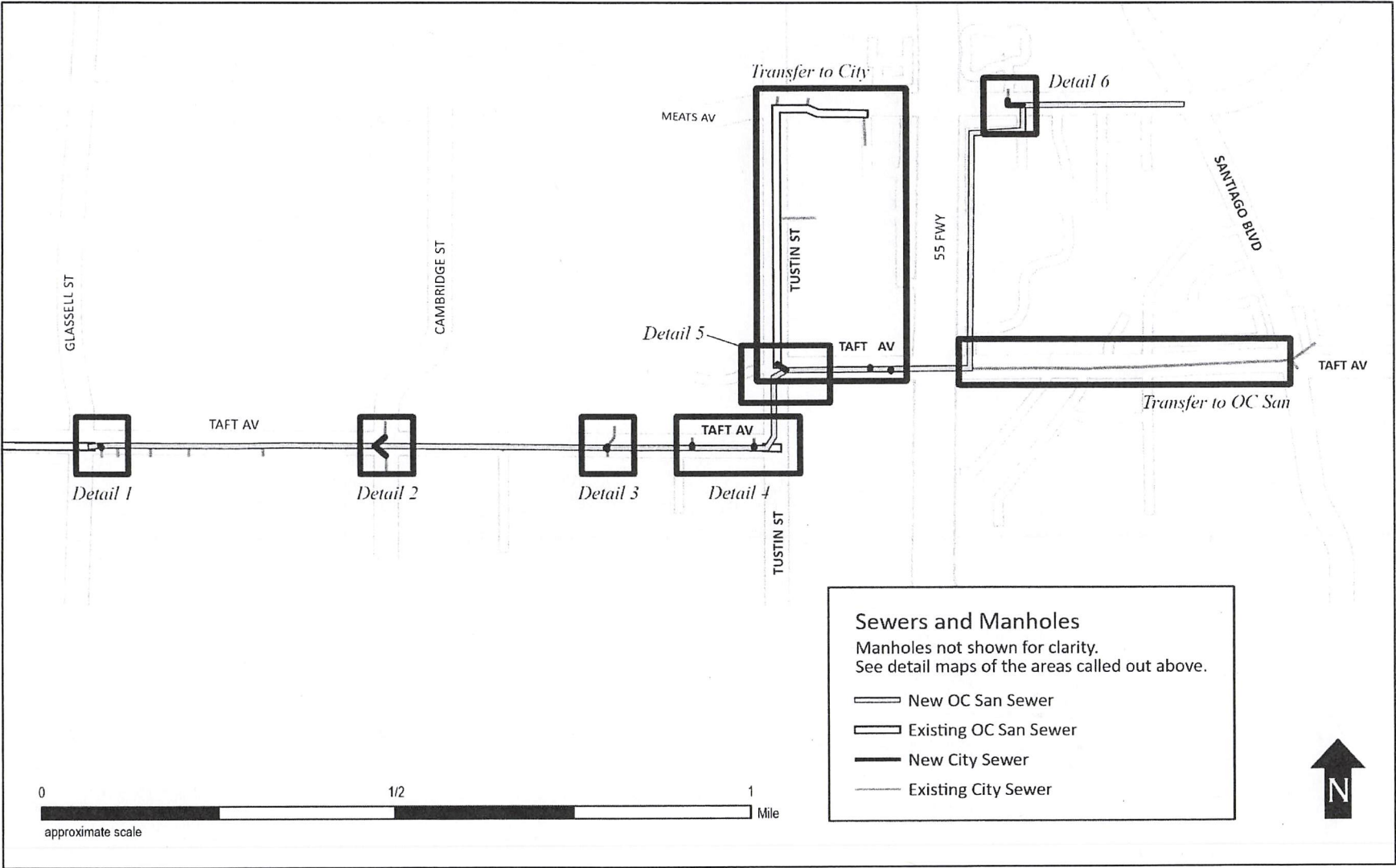
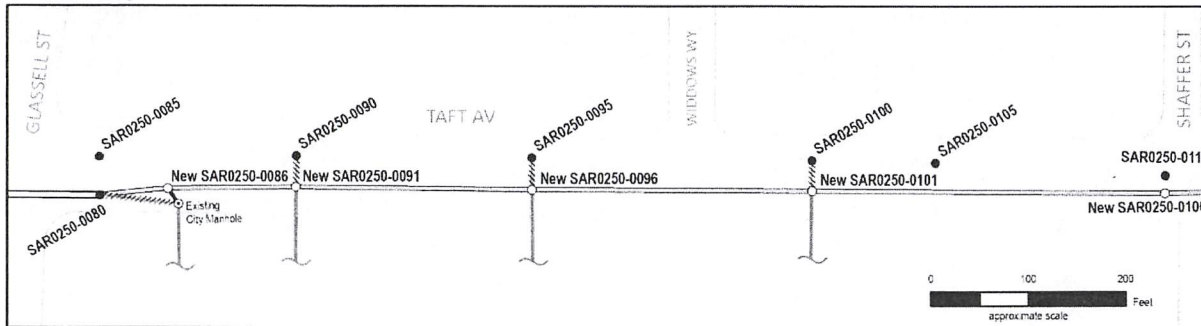


Exhibit D - Depiction of Added Property Constructed by OCSAN to be Transferred to CITY

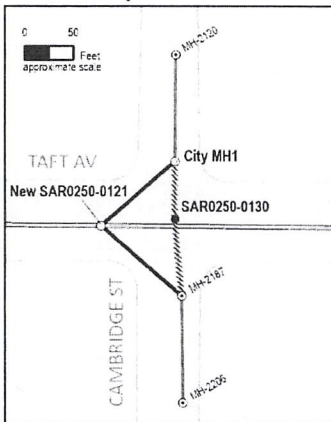
Detail Map 1



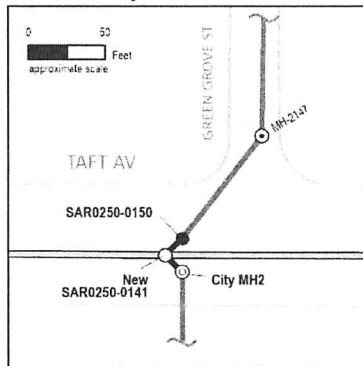
Sewers and Manholes
Detail maps show new City sewer connections to new OC San sewer manholes.

- New City Sewer/Manhole
- Existing City Sewer/Manhole
- City Sewer/Manhole To Be Demolished
- New OC San Sewer/Manhole
- Existing OC San Sewer/Manhole
- OC San Sewer/Manhole To Be Abandoned
- Existing OC San Sewer/Manhole to be Transferred to City

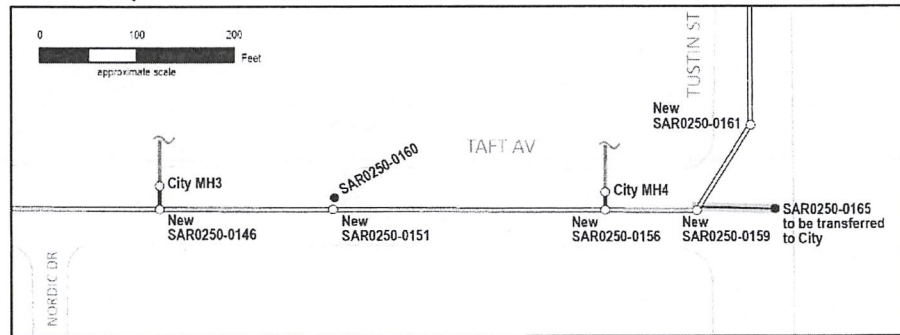
Detail Map 2



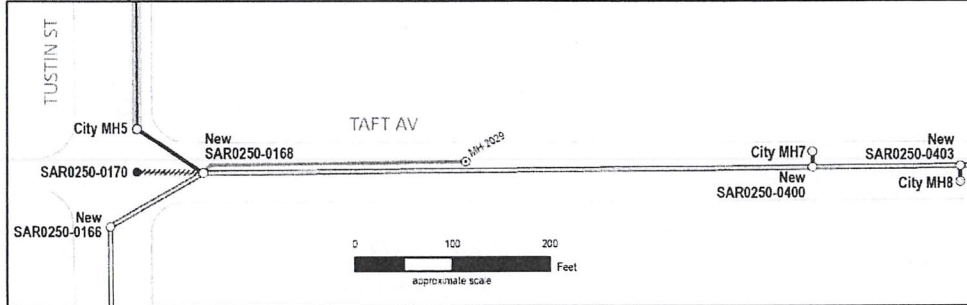
Detail Map 3



Detail Map 4



Detail Map 5



Detail Map 6

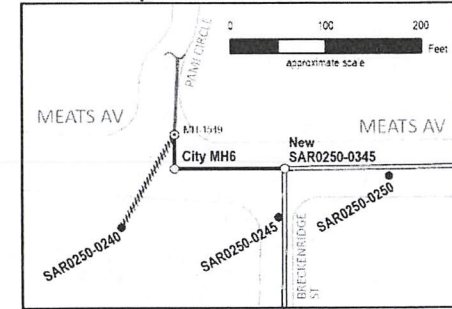


Exhibit E - Description of CITY Property to be Transferred to OCSAN

Pipelines				
Street	Downstream	Upstream	Existing Diameter (inches)	Length (feet)
Taft Ave	MH-2022	MH-2020	12	192
Taft Ave	MH-2001	MH-1995	12	361
Taft Ave	MH-2010	MH-2001	12	369
Taft Ave	MH-2014	MH-2010	12	359
Taft Ave	MH-2016	MH-2014	12	110
Taft Ave	MH-2017	MH-2016	12	172
Taft Ave	MH-2019	MH-2021	12	350
Taft Ave	MH-2020	MH-2019	12	353
Taft Ave	MH-2021	MH-2017	12	123

Exhibit E - Description of CITY Property to be Transferred to OCSAN

Manholes	
Street	Manhole ID
Taft Ave	MH-1995
Taft Ave	MH-2001
Taft Ave	MH-2010
Taft Ave	MH-2014
Taft Ave	MH-2016
Taft Ave	MH-2017
Taft Ave	MH-2019
Taft Ave	MH-2020
Taft Ave	MH-2021

Exhibit F - Depiction of CITY Property to be Transferred to OCSAN

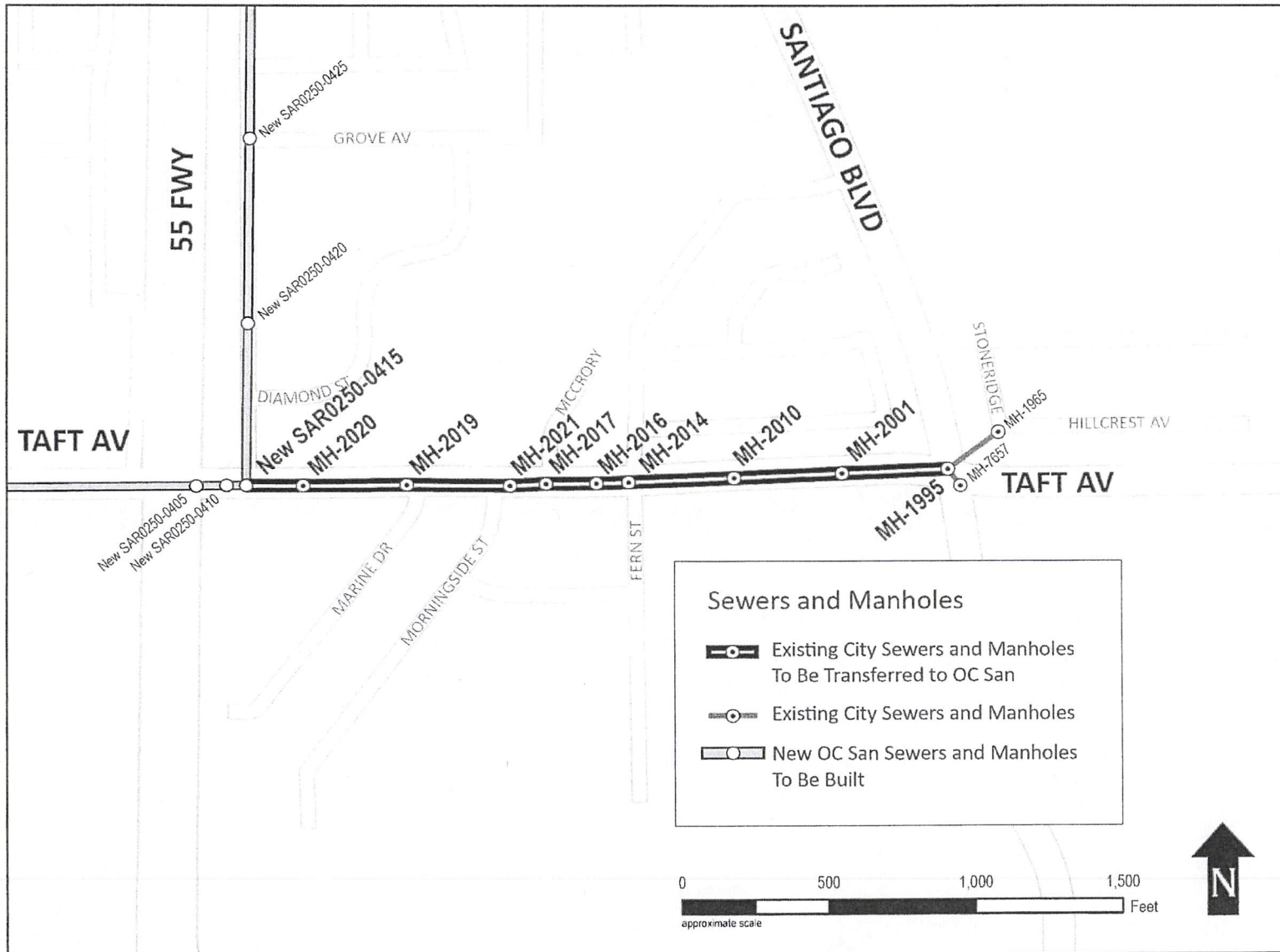
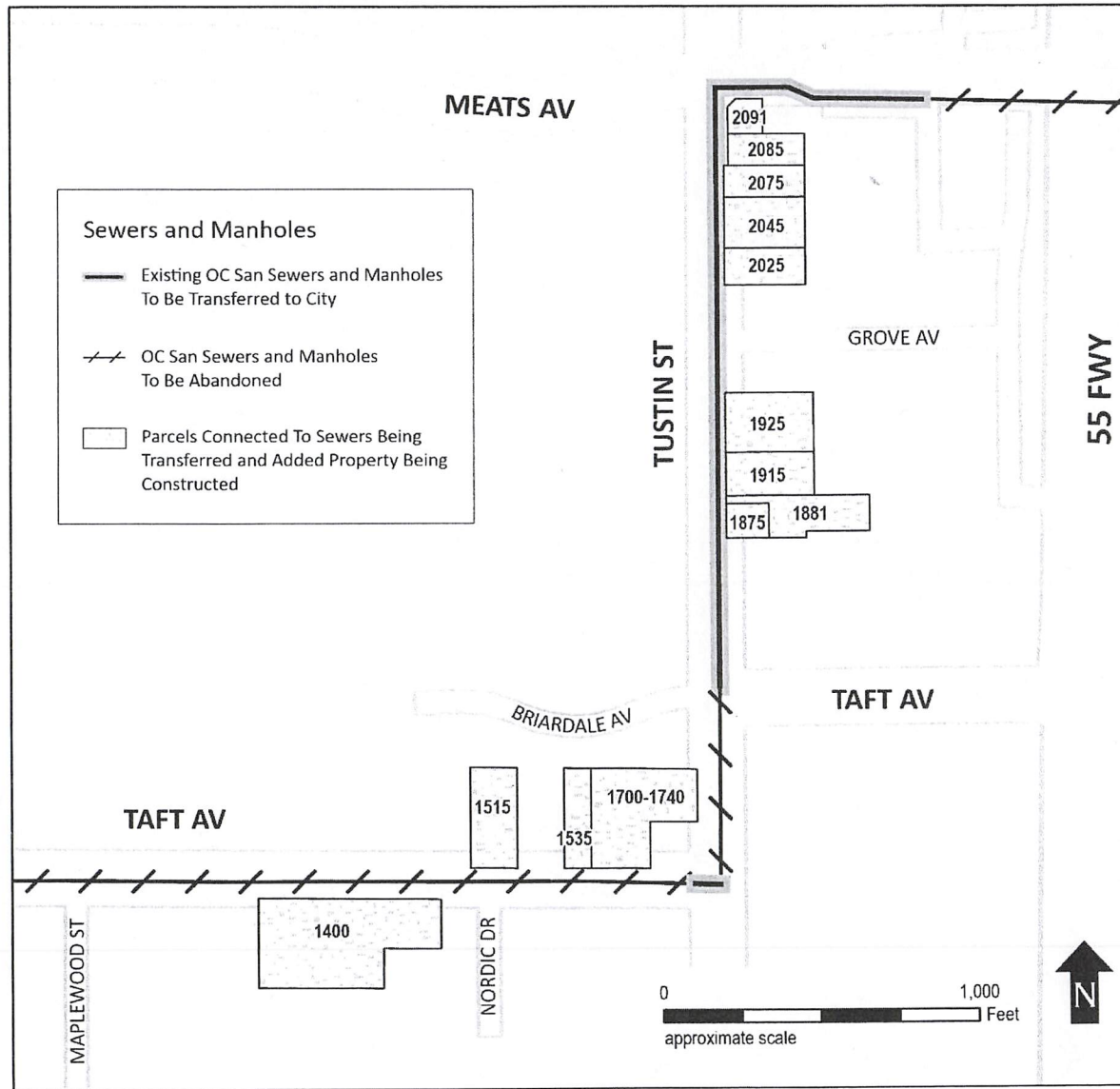


Exhibit G - Properties Tied to Facilities Subject to CITY Operation and Maintenance Responsibility After Transfer



**MEMORANDUM OF UNDERSTANDING
BETWEEN THE ORANGE COUNTY SANITATION DISTRICT AND THE CITY OF
ORANGE FOR THE CONSTRUCTION AND TRANSFER OF SEWER FACILITIES IN
CONJUNCTION WITH PROJECT 2-49**

THIS MEMORANDUM OF UNDERSTANDING ("MOU"), is made and entered into on this 22nd day of May, 2024, by and between the:

ORANGE COUNTY SANITATION DISTRICT,
a County Sanitation District, hereinafter referred to as "OCSAN";

AND

CITY OF ORANGE, California, a Municipal Corporation,
hereinafter referred to as "City."

OCSAN and City are sometimes hereinafter individually referred to as "Party" and hereinafter collectively referred to as "Parties."

RECITALS

WHEREAS, OCSAN is a duly organized County Sanitation District existing pursuant to the County Sanitation District Act, California Health and Safety Code section 4700, et seq., providing for the ownership, operation, and maintenance of waste collection, treatment, and disposal facilities within Orange County, California; and

WHEREAS, City is a municipal corporation duly organized and validly existing under the laws of the State of California, with the power to carry on its business as it is now being conducted under the statutes of the State of California; and

WHEREAS, OCSAN is a regional operator of sewage collection and sewage treatment facilities, which owns and operates, among other facilities, regional sewage collection facilities, including trunk sewer pipelines as large as 108 inches in diameter.

WHEREAS, City operates a local sewage collection system, which collects sewage from properties within its jurisdiction and then transfers it to OCSAN via connection to OCSAN's regional sewage collection and treatment facilities.

WHEREAS, OCSAN is engaged in Project No. 2-49 to improve its facilities in the City that run west along Meats Avenue from Santiago Blvd. across the 55 Freeway then south along Tustin Street then west along Taft Avenue (the "Taft Branch Improvements"). The Taft Branch Improvements will cause the abandonment of the portion of OCSAN's facilities along Meats Avenue crossing the 55 Freeway and realigning them south along N. Sacramento Street to Taft Avenue.

WHEREAS, in connection with OCSAN's Taft Branch Improvements, OCSAN agrees to transfer to City OCSAN's sewer facilities along Meats west of the 55 Freeway then south on Tustin Street to its first intersection with Taft Avenue; and City agrees to transfer to OCSAN the City's sewer facilities along Taft Avenue from Santiago Blvd., west to N. Sacramento Street, both as further described in the Sewer Transfer Agreement to be recorded in the form attached hereto.

WHEREAS, in conjunction with the OCSAN's Taft Branch Improvements, OCSAN will construct new facilities to be transferred to the City and will modify existing City facilities to convey flow from existing City facilities to OCSAN's newly constructed regional facilities as further described in the Sewer Transfer Agreement.

WHEREAS, City will install video detection cameras within the Taft Branch Improvements corridor which OCSAN has agreed to procure on behalf of City prior to construction of the project at no cost to City pursuant to this MOU.

AGREEMENT

NOW, THEREFORE, the Parties hereto agree as follows:

Section 1: Cooperation. OCSAN and City will work cooperatively so the Taft Branch Improvements can be constructed in a manner that minimizes the costs and impacts to the public. The specific terms and conditions governing the elements of this Agreement are set forth hereinafter.

Section 2: OCSAN's Specific Obligations.

- A. OCSAN will be responsible for compliance with the California Environmental Quality Act ("CEQA") (Pub. Resources Code, Section 21000 et seq.) with respect to the Taft Branch Improvements. OCSAN will be the Lead Agency for purposes of CEQA and, in such capacity, OCSAN will conduct the applicable environmental review. OCSAN will supply to City copies of the OCSAN-approved environmental documents for City's files.
- B. OCSAN will convey to City the existing sewer line segments to be transferred to City pursuant to Section 1(a) of the Sewer Transfer Agreement.
- C. OCSAN will proceed with the design and construction of the sewer line segments to be constructed by OCSAN and transferred to City pursuant to Section 1(b)(1) of the Sewer Transfer Agreement.

Section 3: City's Specific Obligations.

- A. City will review and inspect the plans, specifications and construction of the sewer line segments to be constructed by OCSAN and transferred to City pursuant to Section 1(b)(2) of the Sewer Transfer Agreement.

- B. City will convey the sewer line segments owned by City to be transferred to OCSAN pursuant to Section 2 of the Sewer Transfer Agreement.

Section 4: Taft Branch Improvements Costs.

- A. OCSAN shall be responsible for design costs for the Taft Branch Improvements.
- B. In addition, OCSAN will acquire at no cost to City all video detection system and appurtenances to achieve detection at the following four intersections: (1) Taft and Shaffer; (2) Taft and Cambridge; (3) Tustin and Taft; (4) Tustin and Taft/Briardale.
- C. OCSAN shall restore inductive loop detectors affected by its construction activities within three (3) weeks at the intersection of Taft and Glassell at no cost to City.

Section 5: Risk Transfer and Indemnity.

The Parties agree to indemnify each other pursuant to Section 5 of the Sewer Transfer Agreement.

Section 6: Term. This Agreement will be in full force and effect until the specified obligations of both Parties have been fulfilled.

Section 7: Agents. Any contractor or subcontractor performing work in connection with the work described herein on behalf of either Party will be conclusively deemed to be the servant and agent of each respective Party employing said contractor or subcontractors thereof, acting on behalf and within the scope of such contractor and subcontractor contractual obligations for said Party.

Section 8: Notices. Notice shall be given pursuant to section 10 of the Sewer Transfer Agreement.

Section 9: Jurisdiction. In the event of a dispute regarding performance or interpretation of this Agreement, the venue for any action to enforce or interpret this Agreement will lie in the Superior Court of California for Orange County.

Section 10: No Third Party Beneficiaries. This Agreement is entered into by and for City and OCSAN, and nothing herein is intended to establish rights or interests in individuals or entities not a party hereto.

Section 11: Force Majeure. Except for the payment of money, neither Party will be liable for any delays or other non-performance resulting from circumstances or causes beyond its reasonable control, including without limitation, fire or other casualty, act of God, strike or labor dispute, war or other violence, acts of third parties, or any law, order, or requirement of any governmental agency or authority.

Section 12: Governing Law. This Agreement will be governed by the laws of the State of California.

Section 13: Entire Agreement. This Agreement constitutes the entire understanding and agreement between the Parties and supersedes all previous negotiations and agreements between the Parties pertaining to the subject matter hereof.

Section 14: Waiver. A waiver of a breach of the covenants, conditions, or obligations under this Agreement by either Party will not be construed as a waiver of any succeeding breach of the same or other covenants, conditions, or obligations of this Agreement.

Section 15: Modification. Alteration, change, or modification of this Agreement will be in the form of a written amendment, which will be signed by both Parties.

Section 16: Severability. If any term or portion of this Agreement is held to be invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions of this Agreement will continue in full force and effect.

Section 17: Agreement Execution and Authorization. Each of the undersigned represents and warrants that they are duly authorized to execute and deliver this Agreement and that such execution is binding upon the entity on whose behalf they are executing this Agreement.

[SIGNATURES ON THE NEXT PAGE]

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed as of the day and year first above written.

ORANGE COUNTY SANITATION DISTRICT

By: _____
General Manager

APPROVED AS TO FORM:
GENERAL COUNSEL

ATTEST:

By: _____
Bradley R. Hogin,
General Counsel


By: _____
Kelly Lore,
Clerk of the Board

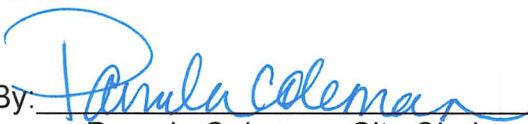
CITY OF ORANGE

By: 
Daniel R. Slater, Mayor

APPROVED AS TO FORM:

ATTEST:

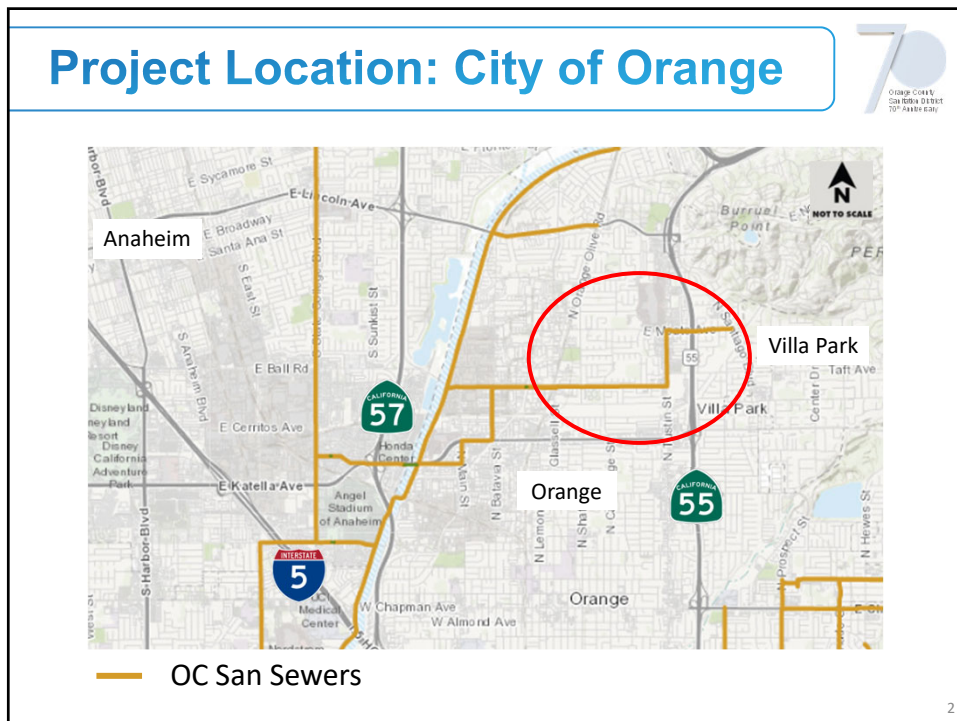
By: 
Nathalie Adourian
Senior Assist. City Attorney

By: 
Pamela Coleman, City Clerk

✓



1



2

Project Overview

- Constructed in 1960
- Project is a capacity driven project not condition
- All open cut construction



3

Existing 55 Crossing



4

Future 55 Crossing



5

5

Agreements – City of Orange



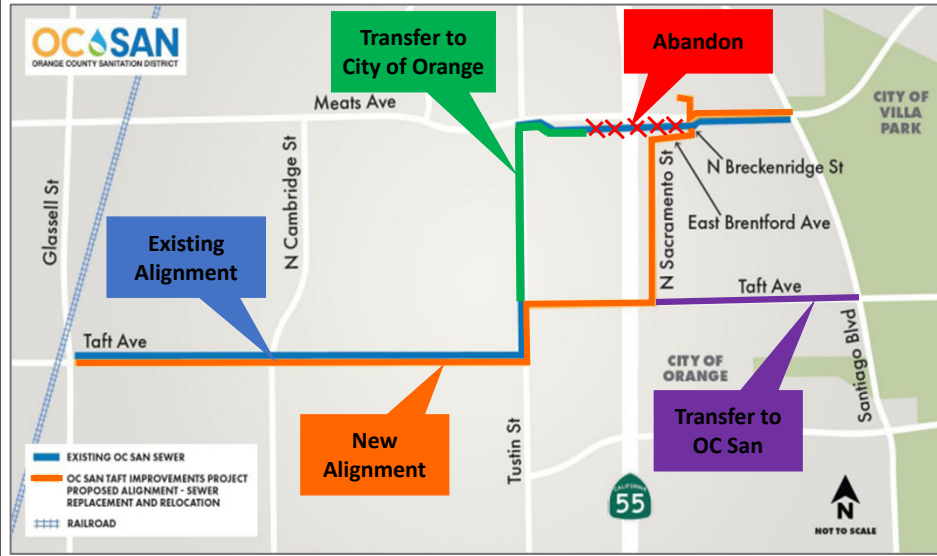
- Memorandum of Understanding
 - OC San provided new traffic cameras in lieu of repairing traffic loops
 - City of Orange installing cameras
- Transfer Agreement



6

6

Sewer Transfer Agreement



7

California Environmental Quality Act (CEQA)

OC SAN
ORANGE COUNTY SANITATION DISTRICT

Initial Study and Mitigated Negative Declaration

Taft Sewer Improvement Project

Prepared by:
Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708

With Assistance From:

Woodard & Curran
530 Technology Way, Suite 100
Irvine, CA 92618
949.405.5106
July 2023

- Revised alignment varied significantly enough from 2020 Programmatic EIR
- Result:
 - Mitigated Negative Declaration
 - Mitigation Monitoring and Reporting Program



8

8

Outreach Efforts

- City of Orange
 - Meetings early and often
 - Resulted in positive plan reviews and agreements
- Community Outreach
 - Community meetings
 - Multiple mailers
 - Door knocking/meetings with businesses and residents
- Construction Constraints
 - Detailed traffic control plans
 - Limited residential street construction duration with associated Liquidated Damages

70
Orange County
Sanitation District
70th Anniversary

JOIN US!
Scan the QR code or visit
ocsan.gov/taft for meeting details.



Design and permitting for this project are underway.

TAFT AVENUE SEWER IMPROVEMENT PROJECT

Orange County Sanitation District (OC San) provides wastewater collection, treatment and recycling services for approximately 3.5 million people in central and northwest Orange County. The OC San Taft Sewer Improvement Project is part of a large capital improvement program to maintain and improve regional sewer infrastructure.

About the Project
The project will replace and relocate a portion of the Taft sewer in the City of Orange. The project will replace about two miles of pipe along Taft Avenue from Cassell Street to Sacramento Street, northbound on Sacramento Street to Broadway Avenue, to Broadway Street in Middle District. The current pipe ranges between 12 to 15 inches and will be replaced to 18 to 24 inches. A portion of the sewer that currently runs along Taft Street will be relocated to North Sacramento Street.

Why is This Infrastructure Needed?
OC San is committed to protecting public health and the environment by providing superior and sustainable infrastructure increasing the size of the pipe as part of the project increases flow capacity to accommodate peak wet weather events and will also increase the future resiliency of the project.

Questions?
Call the Construction Hotline at (714) 946-3900 or email OCsan@ocsan.gov. Go to ocsan.gov/taft to view the QR code below or visit ocsan.gov/taft for the latest project updates and schedule information.

Schedule

	2023	2024	2025	2026
Design	Start			
Anticipated Construction Start				
Anticipated Completion				

OC San Taft Sewer Improvement Project Area



9

Bid Results

Engineer's Estimate \$22,700,000

Bidder	Amount
Big Ben Inc.	\$20,458,250
James W. Fowler Co.	\$22,679,500
T.E. Roberts, Inc.	\$24,817,422
ARB, Inc.	\$24,976,165

10

10

Budget Increase



	Current Budget	Proposed Amount	Requested Increase
Construction Cost	\$17,500,000	\$20,458,250	\$2,958,250
Construction Contingency (10%)	\$1,750,000	\$2,045,825	\$295,825
Staff Labor and Public Outreach			\$615,000
Project Contingency			\$30,925
Total Requested Budget Increase			\$3,900,000

Total Project Budget Increase Request = \$3,900,000

11

11

Recommendation



Recommend to the Board of Directors to:

- A. Adopt Resolution No. OC SAN 24-XX entitled "A Resolution of the Board of Directors of the Orange County Sanitation District adopting the mitigated negative declaration for the Taft Avenue sewer improvement project, Project No. 2-49; adopting a mitigation monitoring and reporting program; and approving the Taft Branch Improvements, Project No. 2-49" which (1) adopts the Initial Study / Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program for the Taft Avenue Sewer Improvement Project, Project No. 2-49, prepared by Woodard & Curran Inc.; (2) approves the project; and (3) directs staff to file a Notice of Determination pursuant to the California Environmental Quality Act;
- B. Approve a project budget increase of \$3,900,000 for Taft Branch Improvements, Project No. 2-49, for a new total project budget of \$31,200,000;
- C. Receive and file the Bid Tabulation and Recommendation for Taft Branch Improvements, Project No. 2-49;

12

12

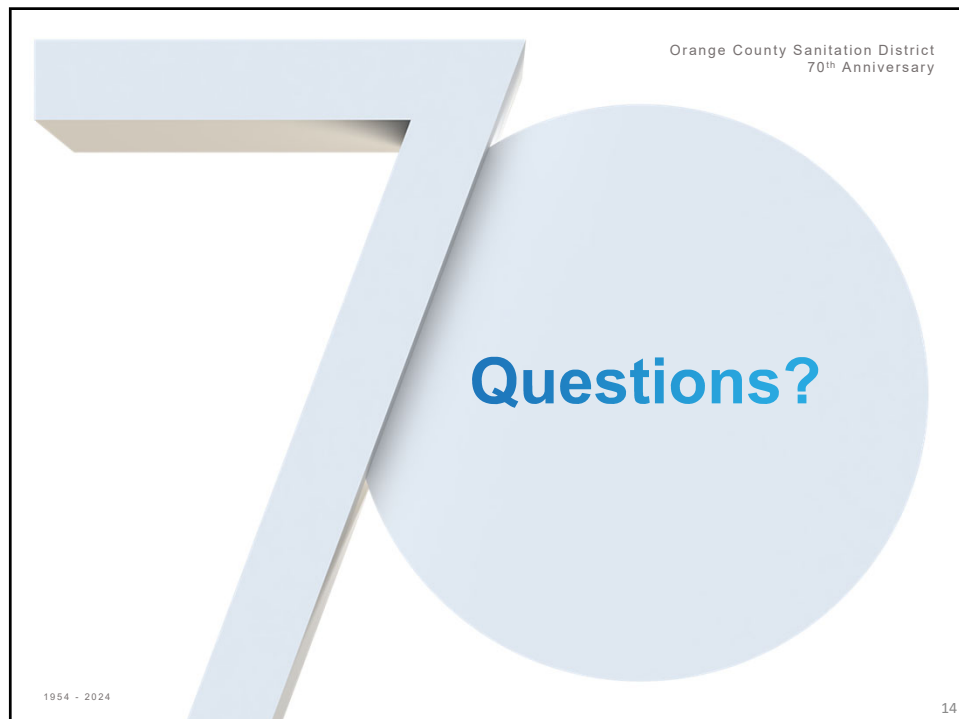
Recommendation (continued)



- D. Award a Construction Contract Agreement to Big Ben Inc. for Taft Branch Improvements, Project No. 2-49, for a total amount not to exceed \$20,458,250;
- E. Approve a contingency of \$2,045,825 (10%);
- F. Approve the Sewer Transfer Agreement between Orange County Sanitation District and the City of Orange, in a form approved by General Counsel, and direct the Clerk of the Board to record the document with the Orange County Clerk-Recorder's office; and
- G. Approve the Memorandum of Understanding between Orange County Sanitation District and the City of Orange for the Construction and Transfer of Sewer Facilities in Conjunction with Project No. 2-49.

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14

File #: 2023-3044

Agenda Date: 5/1/2024

Agenda Item No: 6.

FROM: Robert Thompson, General Manager
Originator: Mike Dorman, Director of Engineering

SUBJECT:

TAFT BRANCH IMPROVEMENTS, PROJECT NO. 2-49

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION: Recommend to the Board of Directors to:

- A. Approve a Professional Construction Services Agreement with Woodard & Curran Inc. to provide construction support services for Taft Branch Improvements, Project No. 2-49, for a total amount not to exceed \$1,108,033; and
- B. Approve a contingency of \$110,803 (10%).

BACKGROUND

Woodard & Curran Inc. was selected as part of a competitive, qualifications-based solicitation process to design Taft Branch Improvements, Project No. 2-49. At the time of the solicitation, the Orange County Sanitation District (OC San) documented its intent to award a subsequent agreement to the design consultant for continuation of engineering services during construction.

This project will upsize the upper reach of the Taft Branch sewer in the City of Orange. This will include replacement of nearly 7,000 feet of pipe and associated manholes along Meats Avenue and Taft Avenue. It includes a new alignment of 3,400 feet on Sacramento Street and Taft Avenue to alleviate existing manhole access issues. The project will also include a swap of regional and local sewers including 2,700 feet of existing OC San piping on Tustin Avenue to be transferred to the City of Orange and 2,600 feet of regional piping owned by City of Orange to be transferred to OC San.

RELEVANT STANDARDS

- Comply with California Government Code Section 4526 to engage the best qualified firm “on the basis of demonstrated competence and qualifications” and “negotiate fair and reasonable fees”
- Ensure the public’s money is wisely spent
- Sound engineering and accounting practices, complying with local, state, and federal laws

PROBLEM

This project requires the design consultant to provide as-needed services during construction including submittal review, responding to the contractor's requests for information, reviewing construction change orders, participating in meetings, attending site visits, and preparing record drawings. The design consultant will also provide specialty on-call services to comply with CEQA issues, if they arise.

PROPOSED SOLUTION

Approve a Professional Construction Services Agreement with the design consultant, Woodard & Curran Inc., to provide engineering support services during construction.

TIMING CONCERNS

Engineering support services will be required at the start of construction. Construction is anticipated to start in June 2024.

RAMIFICATIONS OF NOT TAKING ACTION

The engineering support services needed to facilitate and review construction activities would not be available by the Engineer of Record, which may negatively impact the contract execution.

PRIOR COMMITTEE/BOARD ACTIONS

February 2021 - Approved a Professional Design Services Agreement with Woodard & Curran Inc. to provide engineering services for Taft Branch Improvements, Project No. 2-49, for an amount not to exceed \$2,200,000; and approved a contingency of \$220,000 (10%).

ADDITIONAL INFORMATION

Woodard & Curran Inc. successfully furnished engineering services for the design of this project and their support services during construction will provide continuity through the completion of the project. Staff negotiated with Woodard & Curran Inc. for these support services in accordance with the OC San's adopted policies and procedures. A review of the proposed price was conducted using estimated quantities of requests for information, submittals, meetings, site visits, change order review, and design revisions, as well as the level of effort for preparing record drawings. Based on this review, staff determined the negotiated fee to be fair and reasonable for these services. Staff is requesting a 10 percent contingency in case unanticipated professional services are needed during construction.

CEQA

This contract further implements Project 2-49 (the "Project"). OC San, as lead agency, prepared an Initial Study and Mitigated Negative Declaration ("MND") that analyzed the Project's potential environmental impacts. Consideration of the MND, and a corresponding Mitigation Monitoring and Reporting Program for the Project, are separately agendized for this meeting. No other or different CEQA compliance is required for this item.

FINANCIAL CONSIDERATIONS

This request complies with the authority levels of OC San's Purchasing Ordinance. This item has been budgeted (Budget Update, Fiscal Year 2023-2024, Appendix A, Page 7, Taft Branch Improvements, Project No. 2-49) and the budget is sufficient for the recommended action.

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- Draft Professional Construction Services Agreement

PROFESSIONAL CONSTRUCTION SERVICES AGREEMENT

This PROFESSIONAL CONSTRUCTION SERVICES AGREEMENT, (hereinafter referred to as "Agreement"), is made and entered into to be effective the «date» day of «Month», «year» by and between the ORANGE COUNTY SANITATION DISTRICT, (hereinafter referred to as "OC SAN"), and «CONSULTANT COMPANY», (hereinafter referred to as "CONSULTANT").

WITNESSETH:

WHEREAS, OC SAN desires to engage CONSULTANT to provide construction support services for **Taft Branch Improvements, Project No. 2-49** (Construction Support Services); and

WHEREAS, CONSULTANT is qualified to provide the necessary services for the Construction Support Services in connection with these requirements; and

WHEREAS, OC SAN has adopted procedures in accordance with OC SAN's current Purchasing Ordinance, Section 4.03(B), for the continuation of services and has proceeded in accordance with said procedures to perform the Construction Support Services; and

WHEREAS, at its regular meeting on «Board Meeting Date» the Board of Directors, by Minute Order, accepted the recommendation of the Operations Committee pursuant to OC SAN's current Purchasing Ordinance to approve this Agreement.

NOW, THEREFORE, in consideration of the promises and mutual benefits, which will result to the parties in carrying out the terms of this Agreement, it is mutually agreed as follows:

1. SCOPE OF WORK

CONSULTANT agrees to furnish necessary professional and technical services to accomplish those project elements outlined in the Scope of Work attached hereto as "Attachment A", and by this reference made a part of this Agreement.

- A. The CONSULTANT shall be responsible for the professional quality, technical accuracy, completeness, and coordination of all design, drawings, specifications, and other services furnished by the CONSULTANT under this Agreement, including the work performed by its subconsultants (Subconsultants). Where approval by OC SAN is indicated, it is understood to be conceptual approval only and does not relieve the CONSULTANT of responsibility for complying with all laws, codes, industry standards and liability for damages caused by errors, omissions, noncompliance with industry standards, and/or negligence on the part of the CONSULTANT or its Subconsultants.
- B. CONSULTANT is responsible for the quality of work prepared under this Agreement and shall ensure that all work is performed to the standards of best engineering practice for clarity, uniformity, and completeness.
- C. In the event that work is not performed to the satisfaction of OC SAN and does not conform to the requirements of this Agreement or any applicable industry

standards, the CONSULTANT shall, without additional compensation, promptly correct or revise any errors or deficiencies in its designs, drawings, specifications, or other services within the timeframe specified by the Project Engineer/Project Manager. OC SAN may charge to CONSULTANT all costs, expenses and damages associated with any such corrections or revisions.

- D. All CADD drawings, figures, and other work shall be produced by CONSULTANTS and Subconsultants using OC SAN standard software. Conversion of CADD work from any other non-standard CADD format to OC SAN format shall not be acceptable in lieu of this requirement.

Electronic files shall be subject to an acceptance period of «Number of Days» calendar days during which OC SAN shall perform appropriate acceptance tests. CONSULTANT shall correct any discrepancies or errors detected and reported within the acceptance period at no additional cost to OC SAN.

- E. All professional services performed by the CONSULTANT, including but not limited to all drafts, data, correspondence, proposals, reports, and estimates compiled or composed by the CONSULTANT, pursuant to this Agreement, are for the sole use of OC SAN, its agents and employees. Neither the documents nor their contents shall be released to any third party without the prior written consent of OC SAN. This provision does not apply to information that (a) was publicly known, or otherwise known to the CONSULTANT, at the time that it was disclosed to the CONSULTANT by OC SAN, (b) subsequently becomes publicly known to the CONSULTANT other than through disclosure by OC SAN.

2. COMPENSATION

Total compensation shall be paid to CONSULTANT for the Construction Support Services in accordance with the following provisions:

- A. Total Compensation

Total compensation shall be in an amount not to exceed «Grand Total Written Amount» Dollars (\$«Grand Total Amount»). Total compensation to CONSULTANT including burdened labor (salaries plus benefits), overhead, profit, direct costs, and Subconsultant(s) fees and costs shall not exceed the sum set forth in Attachment "E" - Fee Proposal.

- B. Labor

As a portion of the total compensation to be paid to CONSULTANT, OC SAN shall pay to CONSULTANT a sum equal to the burdened salaries (salaries plus benefits) actually paid by CONSULTANT charged on an hourly-rate basis to this project and paid to the personnel of CONSULTANT. Upon request of OC SAN, CONSULTANT shall provide OC SAN with certified payroll records of all employees' work that is charged to this project.

- C. Overhead

As a portion of the total compensation to be paid to CONSULTANT, OC SAN shall compensate CONSULTANT and Subconsultants for overhead at the rate equal to the percentage of burdened labor as specified in Attachment "E" - Fee Proposal.

D. Profit

Profit for CONSULTANT and Subconsultants shall be a percentage of consulting services fees (Burdened Labor and Overhead). When the consulting or subconsulting services amount is \$250,000 or less, the maximum Profit shall be 10%. Between \$250,000 and \$2,500,000, the maximum Profit shall be limited by a straight declining percentage between 10% and 5%. For consulting or subconsulting services fees with a value greater than \$2,500,000, the maximum Profit shall be 5%. Addenda shall be governed by the same maximum Profit percentage after adding consulting services fees.

As a portion of the total compensation to be paid to CONSULTANT and Subconsultants, OC SAN shall pay profit for all services rendered by CONSULTANT and Subconsultants for this project according to Attachment "E" - Fee Proposal.

E. Subconsultants

For any Subconsultant whose fees for services are greater than or equal to \$100,000 (excluding out-of-pocket costs), CONSULTANT shall pay to Subconsultant total compensation in accordance with the Subconsultant amount specified in Attachment "E" - Fee Proposal.

For any Subconsultant whose fees for services are less than \$100,000, CONSULTANT may pay to Subconsultant total compensation on an hourly-rate basis [If there are no Subconsultants under \$100K, delete this phrase 'per attached hourly rate schedule'.] per the attached hourly rate Schedule and as specified in the Scope of Work. OC SAN shall pay to CONSULTANT the actual costs of Subconsultant fees and charges in an amount not to exceed the sum set forth in Attachment "E" - Fee Proposal.

F. Direct Costs

OC SAN shall pay to CONSULTANT and Subconsultants the actual costs of permits and associated fees, travel and licenses for an amount not to exceed the sum set forth in Attachment "E" - Fee Proposal. OC SAN shall also pay to CONSULTANT actual costs for equipment rentals, leases or purchases with prior approval of OC SAN. Upon request, CONSULTANT shall provide to OC SAN receipts and other documentary records to support CONSULTANT's request for reimbursement of these amounts, see Attachment "D" – Allowable Direct Costs. All incidental expenses shall be included in overhead pursuant to Section 2 - COMPENSATION above.

G. Other Direct Costs

Other Direct Costs incurred by CONSULTANT and its Contractor due to modifications to the Scope of Work resulting from field investigations and field work required by the Agreement. These items may include special equipment, test equipment and tooling and other materials and services not previously identified. Refer to attachment "D" Allowable Direct Costs for payment information.

H. Reimbursable Direct Costs

OC SAN will reimburse the CONSULTANT for reasonable travel and business expenses as described in this section and further described in Attachment "D" - Allowable Direct Costs to this Agreement. The reimbursement of the above-mentioned expenses will be based on an "accountable plan" as considered by Internal Revenue Service (IRS). The plan includes a combination of reimbursements based upon receipts and a "per diem" component approved by IRS. The most recent schedule of the per diem rates utilized by OC SAN can be found on the U.S. General Service Administration website at <http://www.gsa.gov/portal/category/104711#>.

The CONSULTANT shall be responsible for the most economical and practical means of management of reimbursable costs inclusive but not limited to travel, lodging and meals arrangements. OC SAN shall apply the most economic and practical method of reimbursement which may include reimbursements based upon receipts and/or "per diem" as deemed the most practical.

CONSULTANT shall be responsible for returning to OC SAN any excess reimbursements after the reimbursement has been paid by OC SAN.

Travel and travel arrangements – Any travel involving airfare, overnight stays or multiple day attendance must be approved by OC SAN in advance.

Local Travel is considered travel by the CONSULTANT within OC SAN general geographical area which includes Orange, Los Angeles, Ventura, San Bernardino, Riverside, San Diego, Imperial and Kern Counties. Automobile mileage is reimbursable if CONSULTANT is required to utilize personal vehicle for local travel.

Lodging – Overnight stays will not be approved by OC SAN for local travel. However, under certain circumstances overnight stay may be allowed at the discretion of OC SAN based on reasonableness of meeting schedules and the amount of time required for travel by the CONSULTANT. Such determination will be made on a case-by-case basis and at the discretion of OC SAN.

Travel Meals – Per-diem rates as approved by IRS shall be utilized for travel meals reimbursements. Per diem rates shall be applied to meals that are appropriate for travel times. Receipts are not required for the approved meals.

Additional details related to the reimbursement of the allowable direct costs are provided in the Attachment "D" - Allowable Direct Costs of this Agreement.

I. Limitation of Costs

If, at any time, CONSULTANT estimates the cost of performing the services described in CONSULTANT's Proposal will exceed the not-to-exceed amount of the Agreement, including approved additional compensation, CONSULTANT shall notify OC SAN immediately, and in writing. This written notice shall indicate the additional amount necessary to complete the services. Any cost incurred in excess of the approved not-to-exceed amount, without the express written consent of OC SAN's authorized representative shall be at CONSULTANT's own risk. This written notice shall be provided separately from, and in addition to any notification requirements contained in the CONSULTANT's invoice and monthly progress report. Failure to notify OC SAN that the services cannot be completed within the authorized not-to-exceed amount is a material breach of this Agreement.

3. REALLOCATION OF TOTAL COMPENSATION

OC SAN, by its Director of Engineering, shall have the right to approve a reallocation of the incremental amounts constituting the total compensation, provided that the total compensation is not increased.

4. PAYMENT

A. Monthly Invoice: CONSULTANT shall include in its monthly invoice, a detailed breakdown of costs associated with the performance of any corrections or revisions of the work for that invoicing period. CONSULTANT shall allocate costs in the same manner as it would for payment requests as described in this Section of the Agreement. CONSULTANT shall warrant and certify the accuracy of these costs and understand that submitted costs are subject to Section 11 - AUDIT PROVISIONS.

B. CONSULTANT may submit monthly or periodic statements requesting payment for those items included in Section 2 - COMPENSATION hereof in the format as required by OC SAN. Such requests shall be based upon the amount and value of the work and services performed by CONSULTANT under this Agreement and shall be prepared by CONSULTANT and accompanied by such supporting data, including a detailed breakdown of all costs incurred and work performed during the period covered by the statement, as may be required by OC SAN.

Upon approval of such payment request by OC SAN, payment shall be made to CONSULTANT as soon as practicable of one hundred percent (100%) of the invoiced amount on a per task basis.

If OC SAN determines that the work under this Agreement, or any specified task hereunder, is incomplete and that the amount of payment is in excess of:

- i. The amount considered by OC SAN's Director of Engineering to be adequate for the protection of OC SAN; or
- ii. The percentage of the work accomplished for each task.

OC SAN may, at the discretion of the Director of Engineering, retain an amount equal to that which ensures that the total amount paid to that date does not exceed the percentage of the completed work for each task or the project in its entirety.

- C. CONSULTANT may submit periodic payment requests for each 30-day period of this Agreement for the profit as set forth in Section 2 - COMPENSATION above. Said profit payment request shall be proportionate to the work actually accomplished to date on a per task basis. In the event OC SAN's Director of Engineering determines that no satisfactory progress has been made since the prior payment, or in the event of a delay in the work progress for any reason, OC SAN shall have the right to withhold any scheduled proportionate profit payment.
- D. Upon satisfactory completion by CONSULTANT of the work called for under the terms of this Agreement, and upon acceptance of such work by OC SAN, CONSULTANT will be paid the unpaid balance of any money due for such work, including any retained percentages relating to this portion of the work.
- E. Upon satisfactory completion of the work performed hereunder and prior to final payment under this Agreement for such work, or prior settlement upon termination of this Agreement, and as a condition precedent thereto, CONSULTANT shall execute and deliver to OC SAN a release of all claims against OC SAN arising under or by virtue of this Agreement other than such claims, if any, as may be specifically exempted by CONSULTANT from the operation of the release in stated amounts to be set forth therein.
- F. Pursuant to the California False Claims Act (Government Code Sections 12650-12655), any CONSULTANT that knowingly submits a false claim to OC SAN for compensation under the terms of this Agreement may be held liable for treble damages and up to a ten thousand dollars (\$10,000) civil penalty for each false claim submitted. This Section shall also be binding on all Subconsultants.

A CONSULTANT or Subconsultant shall be deemed to have submitted a false claim when the CONSULTANT or Subconsultant: a) knowingly presents or causes to be presented to an officer or employee of OC SAN a false claim or request for payment or approval; b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by OC SAN; c) conspires to defraud OC SAN by getting a false claim allowed or paid by OC SAN; d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to OC SAN; or e) is a beneficiary of an inadvertent submission of a false claim to OC SAN, and fails to disclose the false claim to OC SAN within a reasonable time after discovery of the false claim.

5. CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS (DIR) REGISTRATION AND RECORD OF WAGES

- A. To the extent CONSULTANT's employees and/or Subconsultants who will perform work during the design and preconstruction phases of a construction

contract for which Prevailing Wage Determinations have been issued by the DIR and as more specifically defined under Labor Code Section 1720 et seq, CONSULTANT and Subconsultants shall comply with the registration requirements of Labor Code Section 1725.5. Pursuant to Labor Code Section 1771.4, the work is subject to compliance monitoring and enforcement by the DIR.

- B. The CONSULTANT and Subconsultants shall maintain accurate payroll records and shall comply with all the provisions of Labor Code Section 1776, and shall submit payroll records to the Labor Commissioner pursuant to Labor Code Section 1771.4(a) (3). Penalties for non-compliance with the requirements of Section 1776 may be deducted from progress payments per Section 1776.
- C. Pursuant to Labor Code Section 1776, the CONSULTANT and Subconsultants shall furnish a copy of all certified payroll records to OC SAN and/or general public upon request, provided the public request is made through OC SAN, the Division of Apprenticeship Standards or the Division of Labor Enforcement of the Department of Industrial Relations.
- D. The CONSULTANT and Subconsultants shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulation Section 16461(e).

6. DOCUMENT OWNERSHIP – SUBSEQUENT CHANGES TO PLANS AND SPECIFICATIONS

- A. Ownership of Documents for the Construction Support Services performed.
All documents, including but not limited to, original plans, studies, sketches, drawings, computer printouts and disk files, and specifications prepared in connection with or related to the Scope of Work or Construction Support Services, shall be the property of OC SAN. OC SAN's ownership of these documents includes use of, reproduction or reuse of and all incidental rights, whether or not the work for which they were prepared has been performed. OC SAN ownership entitlement arises upon payment or any partial payment for work performed and includes ownership of any and all work product completed prior to that payment. This Section shall apply whether the CONSULTANT's Construction Support Services are terminated: a) by the completion of the Agreement, or b) in accordance with other provisions of this Agreement. Notwithstanding any other provision of this paragraph or Agreement, the CONSULTANT shall have the right to make copies of all such plans, studies, sketches, drawings, computer printouts and disk files, and specifications.
- B. CONSULTANT shall not be responsible for damage caused by subsequent changes to or uses of the plans or specifications, where the subsequent changes or uses are not authorized or approved by CONSULTANT, provided that the service rendered by CONSULTANT was not a proximate cause of the damage.

7. INSURANCE

- A. General

- i. Insurance shall be issued and underwritten by insurance companies acceptable to OC SAN.
- ii. Insurers must have an "A-" Policyholder's Rating, or better, and Financial Rating of at least Class VIII, or better, in accordance with the most current A.M. Best's Guide Rating. However, OC SAN will accept State Compensation Insurance Fund, for the required policy of Workers' Compensation Insurance subject to OC SAN's option to require a change in insurer in the event the State Fund financial rating is decreased below "B". Further, OC SAN will require CONSULTANT to substitute any insurer whose rating drops below the levels herein specified. Said substitution shall occur within twenty (20) days of written notice to CONSULTANT, by OC SAN or its agent.
- iii. Coverage shall be in effect prior to the commencement of any work under this Agreement.

B. General Liability

The CONSULTANT shall maintain during the life of this Agreement, including the period of warranty, commercial general liability insurance written on an occurrence basis providing the following minimum limits of liability coverage: One Million Dollars (\$1,000,000) per occurrence with Two Million Dollars (\$2,000,000) aggregate. If aggregate limits apply separately to this contract (as evidenced by submission of ISO form CG 25 03 or 25 04), then the aggregate limit may be equivalent to the per occurrence limit. Said insurance shall include coverage for the following hazards: premises-operations, blanket contractual liability (for this Agreement), products liability/completed operations (including any product manufactured or assembled), broad form property damage, blanket contractual liability, independent contractors liability, personal and advertising injury, mobile equipment, owners and contractors protective liability, and cross liability and severability of interest clauses. A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement(s). If requested by OC SAN and applicable, XCU coverage (Explosion, Collapse and Underground) and Riggers/On Hook Liability must be included in the general liability policy and coverage must be reflected on the submitted certificate of insurance. Where permitted by law, CONSULTANT hereby waives all rights of recovery by subrogation because of deductible clauses, inadequacy of limits of any insurance policy, limitations or exclusions of coverage, or any other reason against OC SAN, its or their officers, agents, or employees, and any other consultant, contractor, or subcontractor performing work or rendering services on behalf of OC SAN in connection with the planning, development, and construction of the project. In all its insurance coverages related to the work, CONSULTANT shall include clauses providing that each insurer shall waive all of its rights of recovery by subrogation against OC SAN, its or their officers, agents, or employees, or any other consultant, contractor, or subcontractor performing work or rendering services at the project. Where permitted by law, CONSULTANT shall require similar written express waivers and insurance clauses from each of its Subconsultants of every tier. A waiver of subrogation shall be effective as to any

individual or entity, even if such individual or entity (a) would otherwise have a duty of indemnification, contractual or otherwise, (b) did not pay the insurance premium, directly or indirectly, and (c) whether or not such individual or entity has an insurable interest in the property damaged.

C. Umbrella Excess Liability

The minimum limits of general liability and automobile liability insurance required, as set forth herein, shall be provided for through either a single policy of primary insurance or a combination of policies of primary and umbrella excess coverage. Umbrella excess liability coverage shall be issued with limits of liability which, when combined with the primary insurance, will equal the minimum limits for general liability and automobile liability.

D. Automobile/Vehicle Liability Insurance

The CONSULTANT shall maintain a policy of automobile liability insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and other vehicles providing the following minimum limit of liability coverage: combined single limit of Five Hundred Thousand Dollars (\$500,000). A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement.

E. Drone Liability Insurance

If a drone will be used, drone liability insurance must be maintained by CONSULTANT in the amount of one million dollars (\$1,000,000) in form acceptable to OC SAN.

F. Workers' Compensation Insurance

The CONSULTANT shall provide such workers' compensation insurance as required by the Labor Code of the State of California in the amount of the statutory limit, including employer's liability insurance with a minimum limit of One Million Dollars (\$1,000,000) per occurrence. Such workers' compensation insurance shall be endorsed to provide for a waiver of subrogation in favor of OC SAN. A statement on an insurance certificate will not be accepted in lieu of the actual endorsements unless the insurance carrier is State of California Insurance Fund and the identifier "SCIF" and endorsement numbers 2570 and 2065 are referenced on the certificate of insurance. If an exposure to Jones Act liability may exist, the insurance required herein shall include coverage for Jones Act claims.

G. Errors and Omissions/Professional Liability

CONSULTANT shall maintain in full force and effect, throughout the term of this Agreement, standard industry form professional negligence errors and omissions insurance coverage in an amount of not less than Five Million Dollars (\$5,000,000) with limits in accordance with the provisions of this paragraph. If the policy of insurance is written on a "claims made" basis, said policy shall be

continued in full force and effect at all times during the term of this Agreement, and for a period of five (5) years from the date of the completion of the services hereunder.

In the event of termination of said policy during this period, CONSULTANT shall obtain continuing insurance coverage for the prior acts or omissions of CONSULTANT during the course of performing services under the term of this Agreement. Said coverage shall be evidenced by either a new policy evidencing no gap in coverage or by separate extended "tail" coverage with the present or new carrier.

In the event the present policy of insurance is written on an "occurrence" basis, said policy shall be continued in full force and effect during the term of this Agreement or until completion of the services provided for in this Agreement, whichever is later. In the event of termination of said policy during this period, new coverage shall be obtained for the required period to insure for the prior acts of CONSULTANT during the course of performing services under the term of this Agreement.

CONSULTANT shall provide to OC SAN a certificate of insurance in a form acceptable to OC SAN indicating the deductible or self-retention amounts and the expiration date of said policy and shall provide renewal certificates not less than ten (10) days prior to the expiration of each policy term.

H. Proof of Coverage

The CONSULTANT shall furnish OC SAN with original certificates and amendatory endorsements effecting coverage. Said policies and endorsements shall conform to the requirements herein stated. All certificates and endorsements are to be received and approved by OC SAN before work commences. OC SAN reserves the right to require, at any time, complete, certified copies of all required insurance policies, including endorsements, effecting the coverage required. The following are approved forms that must be submitted as proof of coverage:

- | | |
|---|---|
| • Certificate of Insurance | ACORD Form or other equivalent certificate of insurance form |
| • Additional Insurance (General Liability) | The combination of (ISO Forms) CG 20 10 <u>and</u> CG 20 37 |
| | All other additional insured endorsements must be submitted for approval by OC SAN, and OC SAN may reject alternatives that provide different or less coverage to OC SAN. |
| • Additional Insured (Automobile Liability) | Submit endorsement provided by carrier for OC SAN approval. |
| • Waiver of Subrogation | Submit workers' compensation waiver of |

subrogation endorsement provided by carrier for OC SAN approval.

- Cancellation Notice

No endorsement is required. However, CONSULTANT is responsible for notifying OC SAN of any pending or actual insurance policy cancellation, as described in Article I. Cancellation and Policy Change Notice, below.

I. Cancellation and Policy Change Notice

The CONSULTANT is required to notify OC SAN in writing of any insurance cancellation notice it receives or other knowledge of pending or actual insurance policy cancellation, within two (2) working days of receipt of such notice or acquisition of such knowledge. Additionally, the CONSULTANT is required to notify OC SAN in writing of any change in the terms of insurance, including reduction in coverage or increase in deductible/SIR, within two (2) working days of receipt of such notice or knowledge of same.

Said notices shall be mailed to OC SAN at:

ORANGE COUNTY SANITATION DISTRICT
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Contracts, Purchasing & Materials Management Division

J. Primary Insurance

The general and automobile liability policies shall contain a "Primary and Non Contributory" clause. Any other insurance maintained by OC SAN shall be excess and not contributing with the insurance provided by CONSULTANT.

K. Separation of Insured

The general and automobile liability policies shall contain a "Separation of Insureds" clause.

L. Non-Limiting (if applicable)

Nothing in this document shall be construed as limiting in any way, nor shall it limit the indemnification provision contained in this Agreement, or the extent to which CONSULTANT may be held responsible for payment of damages to persons or property.

M. Deductibles and Self-Insured Retentions

Any deductible and/or self-insured retention must be declared to OC SAN on the certificate of insurance. All deductibles and/or self-insured retentions require approval by OC SAN. At the option of OC SAN, either: the insurer shall reduce

or eliminate such deductible or self-insured retention as respects OC SAN; or the CONSULTANT shall provide a financial guarantee satisfactory to OC SAN guaranteeing payment of losses and related investigations, claim administration and defense expenses.

N. Defense Costs

The general and automobile liability policies shall have a provision that defense costs for all insureds and additional insureds are paid in addition to and do not deplete any policy limits.

O. Subconsultants

The CONSULTANT shall be responsible to establish insurance requirements for any Subconsultant hired by the CONSULTANT. The insurance shall be in amounts and types reasonably sufficient to deal with the risk of loss involving the Subconsultant's operations and work.

P. Limits Are Minimums

If the CONSULTANT maintains higher limits than any minimums shown above, then OC SAN requires and shall be entitled to coverage for the higher limits maintained by CONSULTANT.

8. SCOPE CHANGES

In the event of a change in the Scope of Work or other terms in the Agreement, as requested by OC SAN, the parties hereto shall execute an Amendment to this Agreement setting forth with particularity all terms of the new Agreement, including, but not limited to, any additional CONSULTANT's fees. CONSULTANT hereby agrees to use any and all procedures, programs, and systems required by OC SAN to process and execute such Amendment(s), including, but not limited to, computer programs and systems.

9. PROJECT TEAM AND SUBCONSULTANTS

CONSULTANT shall provide to OC SAN, prior to execution of this Agreement, the names and full description of all Subconsultants and CONSULTANT's project team members anticipated to be used on this project by CONSULTANT. CONSULTANT shall include a description of the scope of work to be done by each Subconsultant and each CONSULTANT's project team member. CONSULTANT shall include the respective compensation amounts for CONSULTANT and each Subconsultant on a per task basis, broken down as indicated in Section 2 -COMPENSATION.

There shall be no substitution of the listed Subconsultants and CONSULTANT's project team members without prior written approval by OC SAN.

10. ENGINEERING REGISTRATION

The CONSULTANT's personnel are comprised of registered engineers and a staff of

specialists and draftsmen in each department. The firm itself is not a registered engineer but represents and agrees that wherever in the performance of this Agreement requires the services of a registered engineer, such services hereunder will be performed under the direct supervision of registered engineers.

11. AUDIT PROVISIONS

- A. OC SAN retains the reasonable right to access, review, examine, and audit, any and all books, records, documents and any other evidence of procedures and practices that OC SAN determines are necessary to discover and verify that the CONSULTANT is in compliance with all requirements under this Agreement. The CONSULTANT shall include OC SAN's right as described above, in any and all of their subcontracts, and shall ensure that these rights are binding upon all Subconsultants.
- B. OC SAN retains the right to examine CONSULTANT's books, records, documents and any other evidence of procedures and practices that OC SAN determines are necessary to discover and verify all direct and indirect costs, of whatever nature, which are claimed to have been incurred, or anticipated to be incurred or to ensure CONSULTANT's compliance with all requirements under this Agreement during the term of this Agreement and for a period of three (3) years after its termination.
- C. CONSULTANT shall maintain complete and accurate records in accordance with generally accepted industry standard practices and OC SAN's policy. The CONSULTANT shall make available to OC SAN for review and audit, all project related accounting records and documents, and any other financial data within 15 days after receipt of notice from OC SAN. Upon OC SAN's request, the CONSULTANT shall submit exact duplicates of originals of all requested records to OC SAN. If an audit is performed, CONSULTANT shall ensure that a qualified employee of the CONSULTANT will be available to assist OC SAN's auditor in obtaining all project related accounting records and documents, and any other financial data.

12. LEGAL RELATIONSHIP BETWEEN PARTIES

The legal relationship between the parties hereto is that of an independent contractor and nothing herein shall be deemed to make CONSULTANT an employee of OC SAN.

13. NOTICES

All notices hereunder and communications regarding the interpretation of the terms of this Agreement, or changes thereto, shall be effected by delivery of said notices in person or by depositing said notices in the U.S. mail, registered or certified mail, return receipt requested, postage prepaid.

Notices shall be mailed to OC SAN at:

ORANGE COUNTY SANITATION DISTRICT
10844 Ellis Avenue
Fountain Valley, CA 92708-7018

Attention: «Contracts Administrator's Name», «Contracts Administrator's Title»
Copy: «Project Manager's Name», Project Manager

Notices shall be mailed to CONSULTANT at:

«CONSULTANT COMPANY»
«Street Address»
«City, State Zip»
Attention: «CONSULTANT's Representative»

All communication regarding the Scope of Work, will be addressed to the Project Manager. Direction from other OC SAN's staff must be approved in writing by OC SAN's Project Manager prior to action from the CONSULTANT.

14. TERMINATION

OC SAN may terminate this Agreement at any time, without cause, upon giving thirty (30) days written notice to CONSULTANT. In the event of such termination, CONSULTANT shall be entitled to compensation for work performed on a prorated basis through and including the effective date of termination.

CONSULTANT shall be permitted to terminate this Agreement upon thirty (30) days written notice only if CONSULTANT is not compensated for billed amounts in accordance with the provisions of this Agreement, when the same are due.

Notice of termination shall be mailed to OC SAN and/or CONSULTANT in accordance with Section 13 - NOTICES.

15. DOCUMENTS AND STUDY MATERIALS

The documents and study materials for this project shall become the property of OC SAN upon the termination or completion of the work. CONSULTANT agrees to furnish to OC SAN copies of all memoranda, correspondence, computation, and study materials in its files pertaining to the work described in this Agreement, which is requested in writing by OC SAN.

16. COMPLIANCE

A. Labor

CONSULTANT certifies by the execution of this Agreement that it pays employees not less than the minimum wage as defined by law, and that it does not discriminate in its employment with regard to race, color, religion, sex or national origin; that it is in compliance with all federal, state and local directives and executive orders regarding non-discrimination in employment; and that it agrees to demonstrate positively and aggressively the principle of equal opportunity in employment.

B. Air Pollution

CONSULTANT and its subconsultants and subcontractors shall comply with all

applicable federal, state and local air pollution control laws and regulations.

C. Iran Contracting Act

CONSULTANT and its subconsultants and subcontractors shall comply with the Iran Contracting Act of 2010 (Public Contract Code sections 2200-2208).

17. AGREEMENT EXECUTION AUTHORIZATION

Both OC SAN and CONSULTANT do covenant that each individual executing this document by and on behalf of each party is a person duly authorized to execute agreements for that party.

18. DISPUTE RESOLUTION

In the event of a dispute arising between the parties regarding performance or interpretation of this Agreement, the dispute shall be resolved by binding arbitration under the auspices of the Judicial Arbitration and Mediation Service ("JAMS"), or similar organization or entity conducting alternate dispute resolution services.

19. ATTORNEY'S FEES, COSTS AND NECESSARY DISBURSEMENTS

If any action at law or in equity or if any proceeding in the form of an Alternative Dispute Resolution (ADR) is necessary to enforce or interpret the terms of this Agreement, the prevailing party shall be entitled to reasonable attorney's fees, costs and necessary disbursements in addition to any other relief to which it may be entitled.

20. PROGRESS REPORTS

Monthly progress reports shall be submitted for review by the tenth day of the following month and must include as a minimum: 1) current activities, 2) future activities, 3) potential items that are not included in the Scope of Work, 4) concerns and possible delays, 5) percentage of completion, and 6) budget status.

21. WARRANTY

CONSULTANT shall perform its services in accordance with generally accepted industry and professional standards. If, within the 12-month period following completion of its services, OC SAN informs CONSULTANT that any part of the services fails to meet those standards, CONSULTANT shall, within the time prescribed by OC SAN, take all such actions as are necessary to correct or complete the noted deficiency(ies).

22. INDEMNIFICATION

To the fullest extent permitted by law, CONSULTANT shall indemnify, defend (at CONSULTANT's sole cost and expense and with legal counsel approved by OC SAN, which approval shall not be unreasonably withheld), protect and hold harmless OC SAN and all of OC SAN's officers, directors, employees, consultants, and agents (collectively the "Indemnified Parties"), from and against any and all claims, damages, liabilities, causes of action, suits, arbitration awards, losses, judgments, fines, penalties, costs and

expenses including without limitation, attorneys' fees, disbursements and court costs, and all other professional, expert or consultants fees and costs and OC SAN's general and administrative expenses (individually, a "Claim", or collectively, "Claims") which may arise from or are in any manner related, directly or indirectly, to any work performed, or any operations, activities, or services provided by CONSULTANT in carrying out its obligations under this Agreement to the extent of the negligent, recklessness and/or willful misconduct of CONSULTANT, its principals, officers, agents, employees, CONSULTANT's suppliers, consultants, subconsultants, subcontractors, and/or anyone employed directly or indirectly by any of them, regardless of any contributing negligence or strict liability of an Indemnified Party. Notwithstanding the foregoing, nothing herein shall be construed to require CONSULTANT to indemnify the Indemnified Parties from any Claim arising from:

- (A) the sole or active negligence or willful misconduct of the Indemnified Parties; or
- (B) a natural disaster or other act of God, such as an earthquake; or
- (C) the independent action of a third party who is neither one of the Indemnified Parties nor the CONSULTANT, nor its principal, officer, agent, employee, nor CONSULTANT's supplier, consultant, subconsultant, subcontractor, nor anyone employed directly or indirectly by any of them.

Exceptions (A) through (B) above shall not apply, and CONSULTANT shall, to the fullest extent permitted by law, indemnify the Indemnified Parties, from Claims arising from more than one cause if any such cause taken alone would otherwise result in the obligation to indemnify hereunder.

CONSULTANT's liability for indemnification hereunder is in addition to any liability CONSULTANT may have to OC SAN for a breach by CONSULTANT of any of the provisions of this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit CONSULTANT's indemnification obligation or other liability hereunder.

The terms of this Agreement are contractual and the result of negotiation between the parties hereto. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code Section 1654) that ambiguities are to be construed against the drafting party, shall not be employed in the interpretation of this Agreement.

23. DUTY TO DEFEND

The duty to defend hereunder is wholly independent of and separate from the duty to indemnify and such duty to defend shall exist regardless of any ultimate liability of CONSULTANT and shall be consistent with Civil Code Section 2782.8. Such defense obligation shall arise immediately upon presentation of a Claim by any person if, without regard to the merit of the Claim, such Claim could potentially result in an obligation to indemnify one or more Indemnified Parties, and upon written notice of such Claim being provided to CONSULTANT. Payment to CONSULTANT by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition precedent to enforcing such Indemnified Party's rights to indemnification hereunder. In the event a final judgment, arbitration, award, order, settlement, or other final resolution

expressly determines that the claim did not arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONSULTANT, to any extent, then OC SAN will reimburse CONSULTANT for the reasonable costs of defending the Indemnified Parties against such claims.

CONSULTANT's indemnification obligation hereunder shall survive the expiration or earlier termination of this Agreement until such time as action against the Indemnified Parties for such matter indemnified hereunder is fully and finally barred by the applicable statute of limitations.

24. CONSULTANT PERFORMANCE

The CONSULTANT's performance shall be evaluated by OC SAN. A copy of the evaluation shall be sent to the CONSULTANT for comment. The evaluation, together with the comments, shall be retained by OC SAN and may be considered in future CONSULTANT selection processes.

25. COMPLIANCE WITH OC SAN POLICIES AND PROCEDURES

CONSULTANT shall comply with all OC SAN policies and procedures including the Contractor Safety Standards, as applicable, all of which may be amended from time to time.

26. CLOSEOUT

When OC SAN determines that all work authorized under the Agreement is fully complete and that OC SAN requires no further work from CONSULTANT, or the Agreement is otherwise terminated or expires in accordance with the terms of the Agreement, OC SAN shall give the Consultant written notice that the Agreement will be closed out. CONSULTANT shall submit all outstanding billings, work submittals, deliverables, reports or similarly related documents as required under the Agreement within thirty (30) days of receipt of notice of Agreement closeout.

Upon receipt of CONSULTANT's submittals, OC SAN shall commence a closeout audit of the Agreement and will either:

- i. Give the CONSULTANT a final Agreement Acceptance: or
- ii. Advise the CONSULTANT in writing of any outstanding item or items which must be furnished, completed, or corrected at the CONSULTANT's cost.

CONSULTANT shall be required to provide adequate resources to fully support any administrative closeout efforts identified in this Agreement. Such support must be provided within the timeframe requested by OC SAN.

Notwithstanding the final Agreement Acceptance the CONSULTANT will not be relieved of its obligations hereunder, nor will the CONSULTANT be relieved of its obligations to complete any portions of the work, the non-completion of which were not disclosed to OC SAN (regardless of whether such nondisclosures were fraudulent, negligent, or otherwise); and the CONSULTANT shall remain obligated under all those provisions of

the Agreement which expressly or by their nature extend beyond and survive final Agreement Acceptance.

Any failure by OC SAN to reject the work or to reject the CONSULTANT's request for final Agreement Acceptance as set forth above shall not be deemed to be acceptance of the work by OC SAN for any purpose nor imply acceptance of, or agreement with, the CONSULTANT's request for final Agreement Acceptance.

27. ENTIRE AGREEMENT

This Agreement constitutes the entire understanding and agreement between the Parties and supersedes all previous negotiations between them pertaining to the subject matter thereof.

IN WITNESS WHEREOF, this Agreement has been executed in the name of OC SAN and CONSULTANT by their respective duly authorized officers as of the day and year first written above.

CONSULTANT: COMPANY NAME

By _____ Date _____

Printed Name & Title

ORANGE COUNTY SANITATION DISTRICT

By _____ Date _____
Chad P. Wanke
Board Chairman

By _____ Date _____
Kelly A. Lore
Clerk of the Board

By _____ Date _____
Ruth Zintzun
Finance & Procurement Manager

Attachments: Attachment "A" – Scope of Work
Attachment "B" – Not Used
Attachment "C" – Not Used
Attachment "D" – Allowable Direct Costs
Attachment "E" – Fee Proposal
Attachment "F" – Not Used
Attachment "G" – Not Used
Attachment "H" – Not Used
Attachment "I" – Cost Matrix and Summary
Attachment "J" – Not Used
Attachment "K" – Minor Subconsultant Hourly Rate Schedule
Attachment "L" – Contractor Safety Standards
Attachment "M" – Iran Contracting Act Verification

DM:xx

TAFT BRANCH IMPROVEMENTS

PROJECT NO. 2-49

PROFESSIONAL CONSTRUCTION SERVICES AGREEMENT

ATTACHMENT A – SCOPE OF WORK

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I. SUMMARY

Provide construction engineering support services for the construction and installation, and closeout phases of this project.

II. PROJECT SCHEDULE

The schedule for the services specified in this Scope of Work (SOW) shall be provided per the construction contract schedule, and the following schedule constraints:

Task(s)	Period of Performance
Submittals	As described under Task 4.3 - Submittal Reviews
Request for Information	As described under Task 4.4 - Request for Information
Record Drawings	Draft Record Drawings shall be submitted to OC SAN within 60 days of receipt from OC SAN of the approved Contractor's As-Built Drawings. The final Record Drawings shall be submitted within 21 days of receipt of OC SAN's comments on the Draft Record Drawings.

III. PROJECT IMPLEMENTATION

All Orange County Sanitation District (OC SAN) projects are divided into six phases. The CONSULTANT shall provide engineering support services for Phase 4 Construction and Installation Services, and Phase 6 Closeout.

Phase 1 – Project Development – *Completed*

Phase 2 – Preliminary Design – *Completed*

Phase 3 – Final Design – *Completed*

Phase 4 – Construction and Installation Services

Phase 5 – Commissioning Services – Not Included

Phase 6 – Closeout

PHASE 4 – CONSTRUCTION AND INSTALLATION SERVICES

OC SAN will administer and provide field inspection for the construction contract. Construction engineering support services shall be provided by the CONSULTANT as requested by OC SAN.

The CONSULTANT shall provide the key project personnel as described in its proposal for this project. The CONSULTANT shall not reassign the key project personnel without prior approval of OC SAN. OC SAN may request reassignment of any of the CONSULTANT's or its subconsultant's personnel, based on poor performance.

For all services, the CONSULTANT shall refer to the Engineering Design Guidelines, Chapter 01 for detailed requirements.

Quality Assurance/Quality Control (QA/QC): The CONSULTANT shall administer a program of QA/QC procedures for producing quality work and shall effectively manage and control the work. Specific procedures shall include but not be limited to planning, coordination, tracking, checking, reviewing, and scheduling the work. The CONSULTANT shall subject all work products prepared by the CONSULTANT to the CONSULTANT's in-house QA/QC procedures

prior to submittal to OC SAN. QA/QC hours and costs shall be incorporated into other tasks within this SOW.

Task 4.1 – Project Management

The CONSULTANT shall be responsible for detailed management of the work, including managing its subconsultants, and shall keep OC SAN apprised of the status of the work.

The CONSULTANT shall conduct monthly project management meetings with OC SAN. These meetings shall be attended by OC SAN's Project Manager and the CONSULTANT's Project Manager at a mutually agreeable time. The purpose of the meetings shall be to review the CONSULTANT's Project Manager's progress report and the status of the SOW, budget, and any issues which may affect completion of the work. Meetings should be arranged so that the progress report can be submitted three days before each meeting.

The CONSULTANT shall prepare and submit monthly invoices to OC SAN no later than the second Wednesday of the following month. The invoices shall document the hours and billing rate for each person that works on the project for each task in the work breakdown structure (WBS). Overhead, profit, and any direct costs shall also be shown for each task. As part of the summary section of the invoice, the CONSULTANT shall also include the following information:

- Budget
- Current billing period invoicing
- Previous billing period "total invoiced to date"
- Budget amount remaining
- Current billing period "total percent invoice to date"
- Current billing period "total percent completed to date"

The monthly progress report shall be submitted with the invoice as part of the monthly request for payment. The monthly progress report shall include the following:

- Work completed in the billing period
- Work anticipated for the upcoming month
- Outstanding project issues
- Status and issues impacting project scope and budget
- Percent complete, tabulated on a per task basis
- Cost to complete, tabulated on a per task basis
- Overall project budget, tabulated on a per task basis
- Travel and site visit summary
- Log documenting work completed to date on requests for information (RFIs), submittal reviews, Master Document Index (MDI), and change order preparation
- Log identifying and determining status of project risks
- Out of scope items log

The CONSULTANT shall also provide the percent budget spent for each of OC SAN's WBS cost codes (i.e. by work package and phase). OC SAN will provide a list of cost codes by phase to the CONSULTANT.

The CONSULTANT shall also provide a summary of progress and expenditures to date.

OC SAN will provide a sample invoice structure to the CONSULTANT after the issuance of the Notice to Proceed (NTP) for this SOW.

Task 4.1.1 – PMWeb Procedures

This Agreement shall utilize PMWeb as the Project Control Management System (PCMS) for overall management of the Agreement. All PCMS related documents requiring formal signatures shall be digital, and all copies digitally distributed. The PCMS conforms to the requirements set forth in California Government Code section 16.5 regarding digital signatures; therefore, digital signatures are in full force and effect and are legally the same as a hand-written signature. At least one PCMS account shall have the authority to approve Amendments.

OC SAN shall maintain the PCMS and serve as the administrator for the duration of this Agreement. OC SAN will provide the CONSULTANT with user access for approved personnel as needed for the duration of the Agreement. OC SAN shall control access to the PCMS by assigning user profiles and login credentials. CONSULTANT shall notify OC SAN of any changes to personnel. Access modifications shall be coordinated as needed throughout the Agreement. Do not to share PCMS account passwords with anyone inside or outside of the company.

Routine maintenance of the PCMS system may be required during the Agreement. Access to the PCMS system may be restricted or unavailable at these times and will be scheduled outside of typical working hours whenever possible.

The PCMS is a web-based environment and is therefore subject to the inherent speed and connectivity problems of the Internet. The CONSULTANT is responsible for its own connectivity to the Internet. PCMS response time is dependent on the CONSULTANT's equipment, including processor speed, Internet access speed, Internet traffic, etc.

OC SAN will not be liable for any delays associated with the utilization of the PCMS including, but not limited to: slow response time, down time periods, connectivity problems, or loss of information.

The OC SAN will provide a one-time training session of up to two (2) hours to train CONSULTANT's designated staff on general system requirements, procedures, and methods.

Automated system notifications generated via PCMS (e.g., in-system notices, system generated email, or email with attachment) shall constitute a formal written notification in compliance with the Professional Construction Service Agreement (PCSA).

Task 4.1.2 - PM WEB SCHEDULE OF SUBMITTALS

OC SAN has standardized on a Schedule of Submittals to provide uniformity between projects, support a commissioning dashboard, and ensure that submittals are properly retained per the Record Retention Policy. OC SAN has developed an Excel template based on our master specifications.

OC SAN will provide a PMWeb Master Schedule of Submittals template that includes the submittals required by OC SAN's Master Specifications. The CONSULTANT shall not deviate from the Master PMWeb Schedule of Submittals, except as required by the project specifications. The CONSULTANT shall develop submittal items for specifications that are not part of OC SAN's Master Specifications.

After the CONSULTANT has developed the Schedule of Submittals, it will be provided to the Resident Engineer and the Contractor to finalize before submittals are loaded into PMWeb.

Submittals will be loaded into PMWeb based on the package (general construction, safety, and commissioning packages) and commissioning phase.

Task 4.2 – Initial Project Meetings

4.2.1 - Construction Hand-Off Workshop

The CONSULTANT shall participate in a two-hour construction hand-off workshop. The purpose of the workshop is for the CONSULTANT and the OC SAN design team to transfer project-specific knowledge to the OC SAN construction management and inspection staff who will be managing and monitoring construction. Agenda to be used at the meet is below:

1. General Project Overview
 1. Summary of Work and Project Elements
 2. Work Sequence
 3. Work Restrictions
 4. Public Outreach
 5. Schedule/Milestones
2. Project Risks
 1. For example:
 1. Tricky construction
 2. Areas where extra care need to be taken
 3. Submittals that need to be completed early due to lead time
 2. Key decision log items (i.e. any key items/decisions discussed during design that cannot change and we do not want to entertain proposals from the contractor to change?)
 3. Long lead time equipment submittals (timely processing required to avoid delays)
 1. Electrical control panels
 2. Transformers
 3. Special equipment
 4. Other project risk items
3. Project Team
 1. OC SAN Engineering Team
 2. Consultant Team - involvement in Submittals & RFIs.
 3. Stakeholders- include public, organizations, businesses, agencies, O&M-personnel
4. Entitlements
 1. Permits
 2. CEQA - MMs
5. Contractor
 1. Subs
 2. Bid price issues (e.g., did they bid anything suspiciously low)
 3. Past Contractor performance at OC SAN
 1. Strengths
 2. Weaknesses
 4. LDs
 5. Status of PMWeb Submittals List and set up

The workshop will be led by OC SAN's Project Engineer and the CONSULTANT's Project Manager and Project Engineer.

4.2.2 - PMWeb and Submittal Review Procedures Meeting

The CONSULTANT shall participate in a two-hour PMWeb procedure meeting and submittal procedure meeting. The purpose of this meeting is to review the roles and logistics for review and acceptance of construction contract documents and Contractor submittals. The CONSULTANT's Project Manager and Project Engineer shall attend. This meeting will be led by the OC SAN Resident Engineer and will be more specific to this contract than the overall PMWeb training identified in Section 4.1.1.

The project will utilize PMWeb for submittal reviews, project communication, tracking, and management.

4.2.3 - Preconstruction Conference

The CONSULTANT shall participate in a two-hour preconstruction conference attended by OC SAN staff, the CONSULTANT, the Contractor, subcontractors, and vendors. This meeting will be scheduled and presided over by OC SAN. In this meeting, OC SAN's Resident Engineer will describe the CONSULTANT's role in the project as the Design Engineer and the services the CONSULTANT shall provide during construction. OC SAN will prepare meeting minutes and the CONSULTANT shall review and comment on the minutes. Only the Project Manager and Lead Project Engineer shall attend.

Task 4.3 – Submittal Reviews

OC SAN will receive all submittals from the Contractor through PMWeb. OC SAN will forward submittals requiring the CONSULTANT's review to the CONSULTANT via PMWeb. The CONSULTANT shall review the submittals for conformance with the requirements of the Contract Documents and provide review comments to OC SAN through PMWeb within ten (10) calendar days after receipt of a submittal. The CONSULTANT shall return comments to OC SAN allowing enough time for OC SAN to incorporate all comments into a combined review comment set that OC SAN will return to the Contractor. The CONSULTANT shall accommodate occasional expedited reviews for time-sensitive submittals. Submittals shall include but not be limited to shop drawings, vendor tests, certifications, and test reports. All submittals will be made available electronically (PDF) through PMWeb.

If the CONSULTANT has staff other than the assigned technical lead review submittals, the CONSULTANT's technical lead shall review all submittal comments prior to returning them to OC SAN. For all submittals reviewed by the CONSULTANT, the CONSULTANT shall assume that they are the only reviewer for that submittal review and shall not rely on supplemental OC SAN comments.

See Section V - Quantitative Assumptions in this SOW for the estimated number of submittals.

Task 4.4 – Request for Information

OC SAN will forward to the CONSULTANT certain Requests for Information (RFIs) generated by the Contractor or OC SAN. The CONSULTANT shall return written responses to OC SAN as soon as possible or within three (3) calendar days of receipt of the RFIs, clarifying the requirements of the Contract Documents. The CONSULTANT shall generate necessary sketches, figures, and modifications to the drawings for clarification. When required to avoid schedule delay or additional construction-related costs, the CONSULTANT shall expedite the review of time sensitive RFIs.

If any changes to the Contract Documents are required, the CONSULTANT shall prepare these documents and submit them as PDF files to OC SAN. The CONSULTANT shall update all AutoCAD drawings and specifications upon OC SAN acceptance of any changes resulting from RFIs and change orders.

See Section V- Quantitative Assumptions in this SOW for the estimated number of RFIs.

Task 4.5 – Contract Document Modifications, Design Changes and Change Orders

If the Contract Documents require modifications due to changed conditions, OC SAN requested changes, omissions, or design errors; the CONSULTANT shall prepare preliminary change order documents and forward them to OC SAN, as needed. OC SAN shall review the preliminary change order documents and request the CONSULTANT to incorporate any changes. OC SAN will issue the change order documents in a formal Request for Proposal (RFP) or Field Change Order (FCO) to the Contractor. The CONSULTANT shall forward design calculations and other design backup documents as necessary to OC SAN.

Any Contract Document that requires changes shall be identified with the date of change and reference (RFI number, RFP number, FCO number, etc.) shown on the document. Changes shown on the drawings shall be clearly marked and “clouded” for accurate identification of the scope of the change to the Contractor and inspection staff. The CONSULTANT shall maintain up-to-date Contract Documents. When a change is required on a Contract Drawing that has previously undergone a change, the updated drawing showing the previous change shall be used as the base document to identify new changes.

The CONSULTANT shall submit complete change documentation to OC SAN for use in RFIs, RFPs, and FCOs. This change documentation shall include drawings, schematics, details, schedules, and specifications, as required.

The CONSULTANT shall prepare cost estimates for the changes when requested by OC SAN.

The CONSULTANT shall maintain a Master Document Index (MDI) to track all changes issued on the project. The MDI shall be updated monthly and located in PMWeb.

See Section V- Quantitative Assumptions in this SOW for the estimated number of hours.

Task 4.6 – Construction Progress Meetings and Site Visits

The CONSULTANT shall attend up to 20 construction progress meetings in person, as requested by OC SAN’s Resident Engineer. The scope shall include the time for travel, follow-up, and review of meeting minutes. Construction progress meeting minutes will be prepared by OC SAN.

The CONSULTANT shall attend or be available by phone for one-hour weekly construction progress meetings.

The CONSULTANT shall make field visits to assist in field problem resolution and design clarification/verification to help resolve construction issues as they arise and as requested by OC SAN. The CONSULTANT shall report the nature of the field site visits, the problem resolved, and identify staff requesting the site visit in the CONSULTANT’s monthly project report. OC SAN will provide project inspection, except as required in other sections of this SOW.

See Section V- Quantitative Assumptions in this SOW for the estimated number of hours.

Task 4.7 – Public Outreach

OC SAN will be leading all public outreach efforts required for this construction. The CONSULTANT shall provide support for various public outreach activities, such as stakeholder engagement including but not limited to managing public inquiries via email and phone calls, serving as community liaison; planning, developing, and distributing collateral materials; logistics for public meetings, etc.

Public Outreach Plan and Messaging

Prior to construction, the outreach team will update the existing Public Outreach Plan that includes goals, objectives and tactics that detail the overarching outreach strategy to provide education about the purpose for implementing the project that aligns with the demographics of the community and includes effective key messages and communications tools and tactics.

This plan will incorporate public outreach strategies, tactics, refined messaging, and content for implementation to raise awareness, build understanding and trust, and create a relationship allowing for two-way communication between stakeholders and OC San. The plan will include a schedule of outreach tasks and a list of potential opportunities and challenges. A refresh of the stakeholder database will also be provided by the construction management team to ensure accurate contact information is available before construction begins.

Outreach Team Deliverables:

- Communications and Outreach Plan (draft and final)

NOTIFICATIONS

Notifications will be critical throughout construction to ensure stakeholders are informed about the purpose, need and benefits of the project, know what to expect in terms of construction activities and any changes that may arise. A variety of notifications will be used throughout construction, and specific tactics will be consistent with OC San's standard notification processes. The majority of notifications will be provided to stakeholders electronically, but there will also be notifications that are printed and distributed in person or via U.S. Postal Service. OC San's normal email and text notification systems will be used. Notifications will be provided in English and Spanish, and a translation vendor will be utilized for additional languages.

Outreach Team Deliverables:

- Construction Notice Templates (Doorhanger, Postcard, Flier)
- Pre-construction Notices (Postcard, Website Update, E-newsletter, Social Media Content)
- Two (2) Postcards with Printing and Mailing Services
- Two (2) Standard Doorhangers
- Eight (8) Fliers and E-newsletters
- Twelve (12) Website Updates
- Twelve (12) Social Media Posts

INFORMATIONAL MATERIALS

Base informational materials were initially created during Phases 2 and 3, and these will be updated for use throughout construction. The materials will be descriptive and visually appealing with a project description, a map, project team contact information and a clear project schedule. Informational materials for Phase 4 will include a fact sheet, Frequently Asked Questions document, PowerPoint presentation, public-friendly map and public-friendly schedule to support outreach efforts. These materials will be produced to convey technical information accurately and succinctly in a manner that is understandable to non-technical individuals and is consistent with the established key messages. The materials will be provided in English and Spanish, and materials will be provided electronically with print versions provided as needed.

Outreach Team Deliverables

- One (1) Updated Fact Sheet – Draft and final with graphic design
- One (1) FAQs Document – Draft and final with graphic design

- One (1) Updated PowerPoint Presentation – Draft and final with graphic design

STAKEHOLDER COORDINATION AND INQUIRY MANAGEMENT

Progress was made during Phase 3 on building relationships with stakeholders and conducting proactive outreach. Stakeholder coordination will continue throughout construction. Stakeholder coordination and inquiry management are critical for keeping stakeholders informed and for resolving issues that may arise during construction. During design, it is anticipated that three project updates will be delivered to the Board of Directors. In addition, early outreach to key stakeholders will be conducted to inform them about the project and receive targeted input, and up to two outreach events will be completed to communicate with the broader community. These events may be designed as community group presentations or pop-up outreach events in select areas.

Outreach Team Deliverables:

- Pre-construction Individual Contact with Stakeholders from Phase 3 Interviews
- Field Outreach to Sacramento Street Residents (Two Rounds; one before construction and one during construction)
- One-on-One Virtual and In-person Meetings with Stakeholders As Needed
- Inquiry Response and Tracking Through Phase 4

MEETINGS AND EVENTS

A virtual community meeting can be held before construction to inform the community and give a reminder about what to expect during construction. This meeting will also be focused on reaching the Sacramento Street residents who have not yet participated in a community meeting. Additional events and meetings can be arranged during construction as needed, should it be beneficial to meet with stakeholders as a group.

Outreach Team Deliverables:

- One (1) Virtual Community Meeting Before Construction

PROJECT MANAGEMENT/TEAM MEETINGS

Team coordination ensures the best possible outreach and ensures that outreach is conducted at the right times throughout construction. The Community Liaison will participate in weekly construction progress meetings to understand schedule and potential public-facing impacts and prepare for outreach. Monthly activity summaries will be submitted to show progress of outreach activities.

Outreach Team Deliverables:

- Participation in Weekly Progress Meetings to Anticipate Outreach Needs and Understand Current Schedule
- Monthly Activity Summaries (24 months)
- Strategic Counsel Hours As Needed

Task 4.8 – Traffic Control

The CONSULTANT shall secure the services of a Traffic Engineer to provide support for review, response, interpretation, and advice on project issues related to traffic control conditions, as well as to attend and participate in key meetings identified herein. Reviews and responses will be needed in support of RFIs, contract document modifications, and change order duties led by the CONSULTANT. The Traffic Engineer may be required to modify and generate new drawings to support the reviews and responses, and coordinate reviews and approvals with the permitting

agency. The CONSULTANT's Traffic Engineer may be required to visit the site to inspect the traffic control set up at the request of OC SAN.

Task 4.9 – Geotechnical

The CONSULTANT shall provide Geotechnical Engineering services to provide support for review, response, interpretation, and advice on project issues related to geotechnical conditions, geotechnical logs, and data reports, as well as to attend and participate in key meetings identified herein. The CONSULTANT shall provide reviews and responses in support of shop drawing submittals, RFIs, contract document modifications and change order duties led by the CONSULTANT.

Task 4.10 – Shoring Support

The CONSULTANT shall provide shoring support to review submittals, RFIs, RFP, inspection, testing, and conformance to the conformed documents by the shoring designer of record.

Task 4.11 – CEQA Specialist Support

The CONSULTANT shall retain the services of qualified specialist (biologist/archeologist/etc.) to provide all training, monitoring, and/or specialty services to comply with all CEQA mitigation measures.

CONSULTANT proposes the following tasks to ensure compliance with Task 4.11 of the Professional Construction Services Agreement and the biological, cultural, tribal cultural, and paleontological Mitigation Measures (MMs) as outlined in the Mitigation Monitoring and Reporting Program (MMRP) for the Taft Avenue Sewer Improvement Project (project) in the City and County of Orange, California.

4.11.1. BIOLOGICAL RESOURCES

In compliance with Task 4.11, MM BIO-1, AND BIO-2, CONSULTANT will complete each of the tasks listed below.

TASK 4.11.1.1 BIOLOGICAL MONITORING PLAN

CONSULTANT will prepare a Biological Monitoring Plan to comply with the requirements of the MMRP and applicable mitigation measures for the project. Specifically, the Biological Monitoring Plan will define methods and strategies to be used by CONSULTANT biologists in the field to search for active nests and to define appropriate buffer areas, as well as identify any Street Trees that may be impacted by the project. As outlined in MM BIO-1, Nesting Bird Avoidance, the Biological Monitoring Plan will provide a narrative on existing conditions from previously completed studies and define methods, strategies, and timing for pre-construction surveys, biological resource monitoring timing during construction, appropriate noise abatement measures (if needed), and outline procedures if nesting birds are identified. BIO-1 defines buffer size for nesting birds as 300 feet for passerines, and 500 feet for raptors and special-status species. For MM BIO-2, Public and Parkway Trees, the Biological Monitoring Plan will provide guidance on how to identify Street Trees, assess their level of project impact, and whether a Street Tree Removal Permit is necessary to comply with the any local policies or ordinances, such as the City of Orange Tree Preservation Ordinance. CONSULTANT will provide one draft and one final Biological Monitoring Plan.

TASK 4.11.1.2. BIOLOGICAL AWARENESS TRAINING

CONSULTANT will prepare and implement a pre-construction Biological Resources Awareness Training (BRAT). The training will, at a minimum, include the Project

Manager and construction contractor and will be conducted at the project site. The training will include a review of pertinent regulatory policies and a discussion of sensitive resources to be avoided. The BRAT will be presented at the same time as the cultural and paleontological training as outlined in Phase 4.

TASK 4.11.1.3. BIOLOGICAL SURVEYS, MONITORING AND REPORTING

CONSULTANT will provide one field biologist to conduct required pre-construction surveys and to monitor construction work as outlined in the Biological Monitoring Plan. If work takes place during nesting bird nesting season, CONSULTANT will mobilize pre-construction nesting bird surveys 3 days (72 hours) prior to construction implementation. It is assumed that all construction work will take place within the existing road area, no direct impacts to vegetation will be required and construction monitoring for biological resources will only be needed one day per week. It is estimated that no more than 30 days of biological construction monitoring will be necessary throughout the duration of construction. Each monitoring event will be limited to one day per week, up to 8 hours per event..

If nesting birds are identified, CONSULTANT will work with Orange County Sanitation District and the construction contractor to establish required buffers and implement noise mitigation efforts and other tasks to protect nesting birds. The CONSULTANT biological monitor will complete a Nest Log each week, which will track the status of specific nests, if any. Information to be recorded (to the extent discernible) may include species of bird; adult (parent) bird activity; the number of eggs, chicks, and fledglings; and when fledglings leave the nest.

If Street Trees are identified in the project area, their level of impact will be assessed and, per the Biological Monitoring Plan, the biologist will coordinate with OCSD to obtain the appropriate permits in order to cut, trim, prune, or remove the identified Street Trees.

CONSULTANT will provide a brief email report on the project status related to biological resources for each week that biological monitoring occurs. A draft and final report summarizing the results of biological monitoring will be provided at the conclusion of the construction activities.

4.11.2. CULTURAL RESOURCES

In compliance with Task 4.11, MM CUL-1, CUL-2, TCR-1, TCR-2, and TCR-3, CONSULTANT will complete each of the tasks listed below.

TASK 4.11.2.1. LETTER OF RETENTION

Prior to the start of construction, CONSULTANT will prepare a letter of retention to the Client for submittal to the County. The letter will state that a CONSULTANT qualified archaeologist has been retained for the project. The qualified archaeologist will be responsible for compliance with Task 4.11, MM CUL-1, CUL-2, TCR-1, TCR-2, and TCR-3 by way of Tasks 2.2 and 2.3, as described below.

TASK 4.11.2.2. ARCHAEOLOGICAL RESOURCE MANAGEMENT PLAN

To satisfy MM CUL-2 and TCR-2, CONSULTANT will develop an Archaeological Resource Management Plan (ARMP) that will outline the protocols to be implemented in the event of an unanticipated archaeological or tribal cultural resource. The ARMP will include, but not be limited to, the professional qualification standards for archaeological key personnel (following the Secretary of the Interior standards); communication protocols; protocols to follow in the event of an archaeological or potential tribal cultural

resource discovery; an outline for significance evaluations of discovered resources; protocols for sampling, recovery, treatment, and analysis of resources; and reporting and curation requirements. In compliance with MM CUL-2 and TCR-3, the ARMP will also identify the process for contacting tribal groups in the event of inadvertent discovery of archaeological resources potentially affiliated with Native Americans, the County Coroner, and if appropriate, the Native American Heritage Commission, in the case of discovery of human remains.

TASK 4.11.2.3. WORKER ENVIRONMENTAL AWARENESS PROGRAM

In compliance with MM CUL-1 and TCR-1, CONSULTANT will prepare and provide a Worker Environmental Awareness Program (WEAP) to construction personnel and project staff. The training will explain the importance and legal basis for the protection of archaeological and tribal cultural resources and the reporting protocol should a resource be identified when an archaeological monitor is not present. The cultural resources WEAP will be presented at the same time as the biological and paleontological training as outlined in Phase 4.

4.11.3. PALEONTOLOGICAL RESOURCES

In compliance with Task 4.11 and MM GEO-1, CONSULTANT will complete each of the tasks listed below.

TASK 4.11.3.1. LETTER OF RETENTION

Prior to the start of construction, CONSULTANT will prepare a letter of retention to the Client for submittal to the County. The letter will state that a CONSULTANT qualified paleontologist has been retained for the project. This qualified paleontologist will be responsible for compliance with GEO-1, through execution of Tasks 2 and 3, as described below.

TASK 4.11.3.2. MONITORING PLANS

Prior to the commencement of ground disturbing activities, CONSULTANT will prepare a Paleontological Resources Impact Mitigation Program (PRIMP). The PRIMP will include, but not be limited to, the professional qualification standards for paleontological staff (following the Society for Vertebrate Paleontology standards); communication protocols; a description and maps noting the locations/depths where paleontological monitoring is required based on sensitivity and construction plans; the process for modifying monitoring frequency (reducing or discontinuing); protocols to follow in the event of a paleontological resource discovery, including work stoppage and notification procedures; an outline for significance evaluations of discovered resources; protocols for sampling, recovery, treatment, and analysis of resources; and reporting and curation requirements.

TASK 4.11.3.3. WEAP

CONSULTANT will prepare a paleontological training for construction field staff that will outline the requirements of MM GEO-2. The training will also explain the importance and legal basis for the protection of paleontological resources and the reporting protocol should a resource be identified when the paleontological monitor is not present. The paleontological resources WEAP will be presented at the same time as the biological and archaeological training as outlined in Phase 3, below.

TASK 4.11.3.4. PALEONTOLOGICAL MONITORING

As outlined in MM GEO-1, the qualified paleontologist will be on site during initial ground-disturbing activities in areas of previously undisturbed moderate and/or high

paleontological resources sensitivity. It is estimated that no more than 60 “spot-checks” will be necessary throughout the duration of construction. In the event that paleontological resources (e.g., fossils) are unearthed, the processes outlined in the PRIMP will be followed. CONSULTANT will provide a brief email report on the project status related to paleontological resources for each week that paleontological monitoring occurs. A draft and final report summarizing the results of paleontological monitoring will be provided at the conclusion of the construction activities.

4.11.3. CONTRACTOR FIELD STAFF TRAINING MEETING

As outlined in Task 4.11 of the Professional Construction Services Agreement, CONSULTANT will prepare material outlining the biological, cultural, tribal cultural, and paleontological requirements as presented in the MMRP. CONSULTANT will provide the BRAT and WEAP to be included in the field staff training. The training will be presented periodically throughout the project’s lifecycle to ensure that all construction personnel who join the project during the 2-year duration are all adequately trained. A handout of the topics covered will also be provided in advance of the training. A mandatory sign-in sheet will be circulated to document and track crew members receiving the training. It is assumed that all BRAT and WEAP trainings will occur on days that archaeological and biological monitoring occurs.

PHASE 5 – COMMISSIONING SERVICES (NOT USED)

PHASE 6 – CLOSEOUT

Closeout tasks include completion of punch list work by the Contractor, final inspection, completion of Record Drawings, and electronic data. The CONSULTANT shall submit a final invoice at the completion of the project.

Task 6.1 – Final Inspection and Punch Lists

The CONSULTANT’s construction coordinator, and discipline leads shall attend the final inspection job walk with the Contractor and OC SAN staff. The CONSULTANT shall make recommendations on the completion of the work including, but not limited to, completion of punch list items, site cleanup, and SWPPP.

The CONSULTANT shall assist OC SAN in developing punch lists of items required to be completed prior to final acceptance of the project by OC SAN.

See Section V- Quantitative Assumptions in this SOW for the estimated number of hours.

Task 6.2 – Record Drawings

When requested by OC SAN, the CONSULTANT shall attend preliminary as-built meetings with OC SAN and the Contractor to inspect the Contractor’s draft as-built drawings to verify that the Contractor has included all relevant information from approved change orders and RFIs. As part of the review process, the CONSULTANT shall verify that the Contractor’s draft as-built drawings correctly reflect the information included in the approved shop drawings, RFIs, approved FCOs, plan clarifications, plan changes, and other deviations from the conformed Contract Documents, and that the information in the as-built drawings is complete. Based on the findings, CONSULTANT shall prepare a written report on the completeness of the field markup set. The CONSULTANT shall allow for two meetings/visits to review the Contractor’s in progress as-built drawings, it is anticipated these meetings will occur when construction is 75% complete and before the draft final as-built set.

The CONSULTANT shall independently keep a CAD ready set of draft as-built drawings throughout the project. After each meeting with the Contractor, the CONSULTANT shall transpose the Contractor's information to the CONSULTANT's draft CAD ready as-built drawings. The CONSULTANT shall be responsible for marking-up any differences between the Contractor's draft as-built drawings and the CONSULTANT's set.

After final completion of the project, OC SAN will transmit to the CONSULTANT the Contractor's final as-built drawings. At that time, the CONSULTANT shall meet with OC SAN's inspectors and Resident Engineer to review the Contractor's final as-built drawings for completeness.

The CONSULTANT shall prepare Draft Record Drawings based on the final as-built drawings for all drawings in accordance with the requirements in the CAD Manual. Traffic control plans and temporary bracing of shoring will not be updated. The CONSULTANT shall submit the Draft Record Drawings to the OC SAN Resident Engineer. The Draft Record Drawings will be reviewed for content and CAD compliance by OC SAN staff. A comment log will be returned to the CONSULTANT and, if any comments are generated, the CONSULTANT shall revise the Record Drawings and resubmit to the OC SAN Resident Engineer for review of the changes and acceptance of the Record Drawings.

When no additional comments are identified, the CONSULTANT shall prepare the Final Record Drawings and submit them to the OC SAN Project Manager. All hard copies of the Contractor's final as-built drawings shall be returned to OC SAN at this same time. All Record Drawings shall contain a stamp indicating:

Record Drawings	
These record drawings have been prepared based on information provided by others. The Engineer has not verified the accuracy of this information and shall not be responsible for any errors or omissions which may be herein as a result.	

The stamp shall be placed in the title block and may be included by x-ref. In addition, a note shall be placed over the engineer's seal stating that "This drawing was originally approved for construction by [name of engineer] on [date] and sealed by [name of engineer] a licensed professional engineer in the State of California No. [License number] ". The CONSULTANT shall submit an electronic copy of the Record Drawings to OC SAN for review and acceptance. The acceptance of the Record Drawings shall be deemed a condition precedent for completion of the services provided in Phase 6 - Closeout.

The Contractor-generated as-built drawings described in the Engineering Design Guidelines and the shop drawings will not be updated by the CONSULTANT.

The format and quantities for delivery of the submittals shall be as listed below:

Contents	Draft Record Drawings	Final Record Drawings
Hard Copy Sets	None	None
All related electronic files, including CAD and compiled PDFs	Transmit Electronic Files to OC SAN	Transmit Electronic Files to OC SAN

Task 6.3 – Project Management

The CONSULTANT shall also include project management support man-hours related to closeout activities per requirements stated in Phase 4, Project Management Task.

IV. STAFF ASSISTANCE

The OC SAN staff member or designee assigned to work with the CONSULTANT on the construction phase of this project is Rich Leon at (714) 460-3485, email to: rleon@ocsan.gov.

V. QUANTITATIVE ASSUMPTIONS

The assumptions listed in the following table below shall be the basis for the assumed level of effort.

Task	Description	Assumption
4.1	Project Management	From the effective date of the NTP for the construction contract to scheduled final completion. Assumes 24-month duration.
4.1.1	PMWeb Procedures Meeting	PM + PE: Prep and attend 2-hour meeting
4.2.1	Construction Hand-off Meeting	PM + PE: Prep and attend 2-hour meeting
4.2.2	PMWeb Submittal Procedures Meeting	PM + PE: Prep and attend 2-hour meeting
4.2.3	Preconstruction Conference	PM + PE + EOR: Attend 2-hour meeting
4.3	Submittals	50 – Original submittals items ¹ 40 – Resubmittal items 10 – 3 rd and later resubmittal items
4.4	Requests for Information	25 RFIs
4.5	Contract Document Modifications, Design Changes and Change Orders	800 hours
4.6	Construction Progress Meetings Site Visits During Construction	Weekly Progress Meetings @ 1 hour each (virtually): assumes 24-month construction period (less in-person meetings) Construction meetings (in-person): assumes total of 20 meetings 50 Site Visits @ 2 hours each, includes attendance by PE (plus PM or EOR or Tech Lead)
4.7	Public Outreach	Assumes 1,000 hours total of subconsultant time to support; plus coordination time by prime
4.8	Traffic Control	Assumes 300-hours total of subconsultant time to support, including record drawings; plus coordination time by prime
4.9	Geotechnical Support	Assumes 136 hours total of subconsultant time to support; plus coordination time by prime. Includes review of shoring design, RFIs, submittals
4.10	Shoring Support	Shoring review by EOR, structural designer and geotechnical engineer; time is allocated in other tasks already
4.11	CEQA Specialist	Additional <u>biological monitoring</u> can be provided for a cost of \$2,304.00 per week. Additional <u>paleontological monitoring</u> can be provided for a cost of \$1,490.00 per full day of fieldwork.
6.1	Final Inspection and Punch Lists	2 Site Visits @ 4 hours each plus time to develop punch-list and review
6.2	Record Drawings	80 hours
6.3	Project Management	Assumes 4-month duration

¹Note that each submittal set includes multiple submittal items which may be individually submitted by the contractor. The counts listed in this table are considering the individual submittal items. The level of effort should assume these all are received individually.



OPERATIONS COMMITTEE

Agenda Report

Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708
(714) 593-7433

File #: 2024-3566

Agenda Date: 5/1/2024

Agenda Item No: 7.

FROM: Robert Thompson, General Manager
Originator: Mike Dorman, Director of Engineering

SUBJECT:

CONSTRUCTION CHANGE ORDER GOALS AND CONTINGENCY RECOMMENDATIONS

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION:

Information Item.

BACKGROUND

Each month, staff provides an informational presentation on topics of interest to the Board of Directors. This month's topic: Orange County Sanitation District's CIP Program - Construction Change Order Goals and Contingency Recommendations.

RELEVANT STANDARDS

- Ensure the public's money is wisely spent
- Sound engineering and accounting practices, complying with local, state, and federal laws

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- Presentation

70

1954 - 2024

Orange County
Sanitation District
70th Anniversary

Construction Change Order Goals and Contingency Recommendations

Presented by:
Raul Cuellar, Engineering Manager

Operations Committee
May 1, 2024

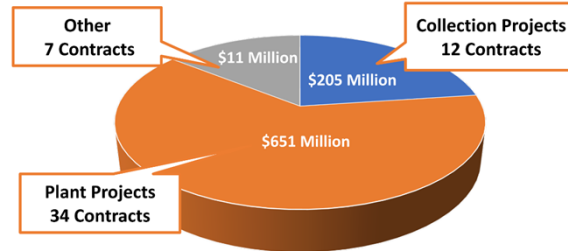
Information Item

1



2

Active Construction Contracts



35 Unique Contractors

Active Construction Contracts	# of Contracts	Contract Amount
Board-Awarded	46	\$865,606,570
Operations Committee Awarded	3	\$462,929
GM Awarded	4	\$354,965
TOTAL	53	\$866,424,464

For the period ending December 31, 2023.

3

3



Types of Projects

Location:

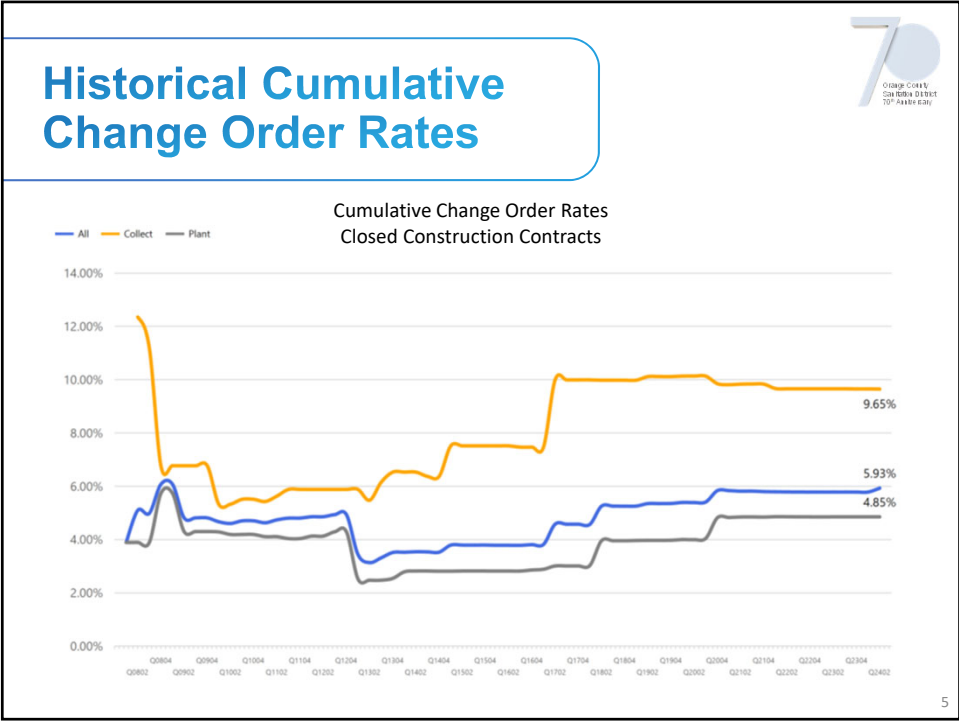
- Plant No. 1 Projects
- Plant No. 2 Projects
- Joint Projects
- Collections Projects
 - Pipelines
 - Pump Stations

Types:

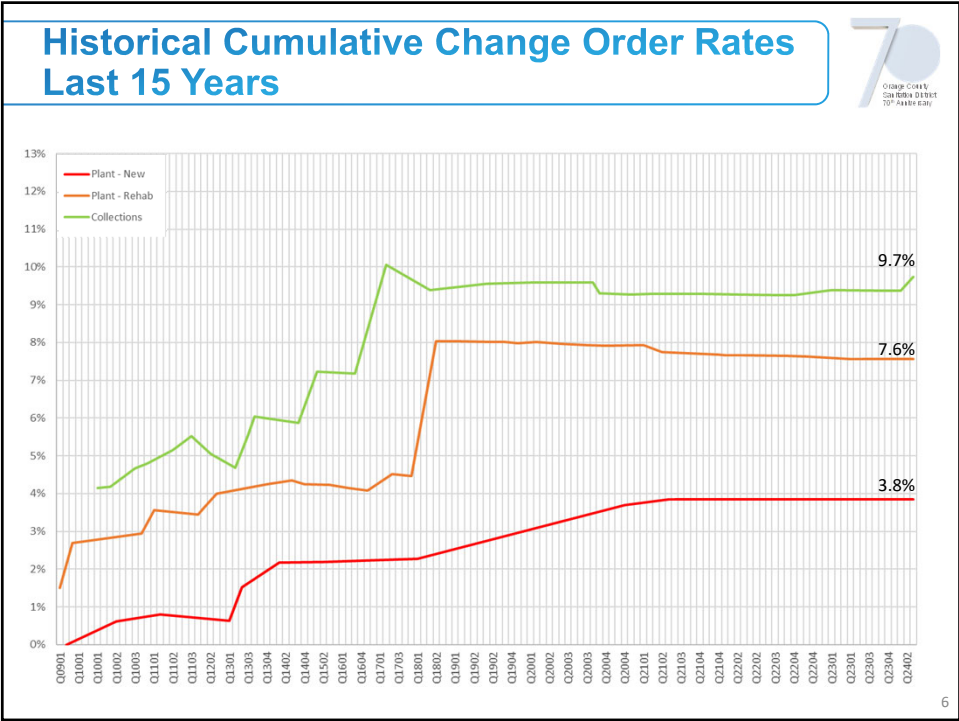
- Rehabilitation
- Replacement
- New Construction

4

4



5



6

Construction Forecast Next 10 Years

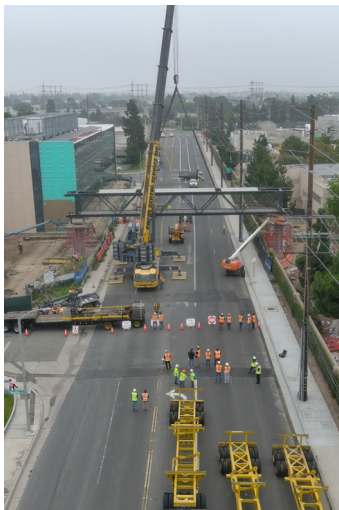


Next 10 Years		
Project Type	Construction Estimate	% of Total
Plant - New	\$ 1,216,232,544	35%
Plant - Rehab	\$ 1,453,379,963	42%
Collections	\$ 762,675,731	22%
Total	\$ 3,432,288,238	100%

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Change Order Goals & Recommendations



Project Type	Last 15 Years Q0901 – Q2402	15-Year Sliding Window Change Order Goal
Plant – New	3.8%	5%
Plant – Rehab	7.6%	8%
Collections	9.7%	10%

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Local Agencies Change Order Contingencies

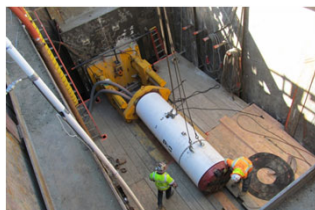


Agency	Contingency Above \$1.0 M Projects	Contingency Complex Projects
City of San Diego Public Utilities Department	2.5% - 5%	8% - 10%
Inland Empire Utilities Agency	15%	10%
Encina Wastewater Authority	10%	>10%
Irvine Ranch Water District	5%	10%
LA County Sanitation District	10%	>10%
City of Ventura Public Works Department	10%	10%

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Recommendations for Contingency Budgeting



Project Type	Under \$100 M	Over \$100 M
Plant – New	10%	Risk Based
Plant – Rehab	10%	Risk Based
Collections	10%	Risk Based

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Construction Change Order Mitigation Measures

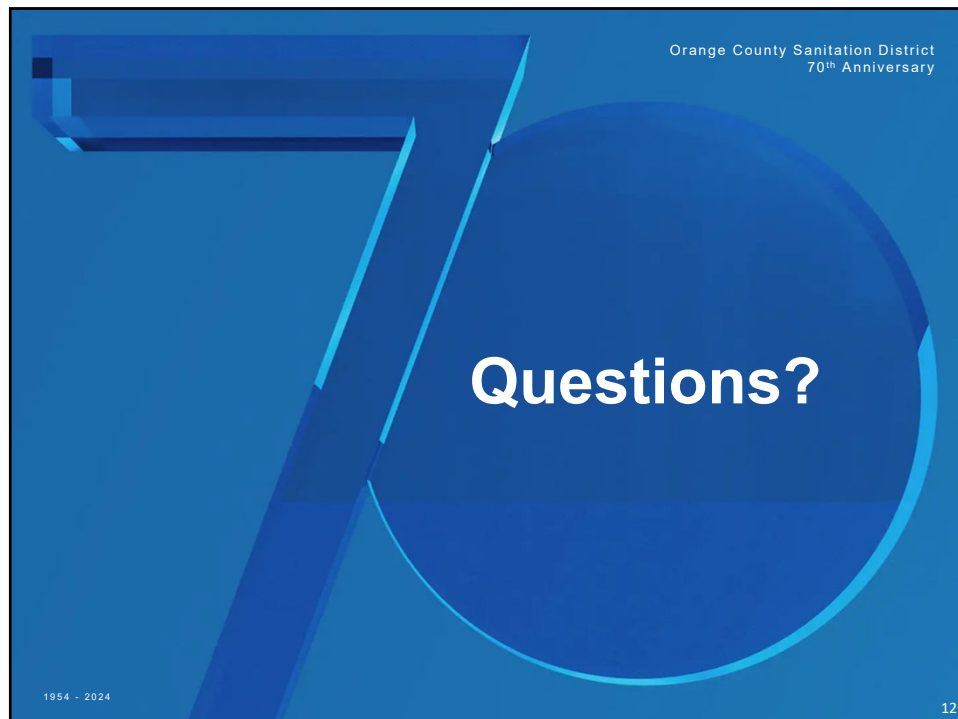


- Risk Management
- Apply Lessons Learned
- Constructability Reviews
- Proactive Collaboration
- Multilevel Approvals for Staff Requested Construction Changes
- Dispute Resolution and Claims Avoidance



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OPERATIONS COMMITTEE

Agenda Report

Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708
(714) 593-7433

File #: 2024-3395

Agenda Date: 5/1/2024

Agenda Item No: 8.

FROM: Robert Thompson, General Manager
Originator: Mike Dorman, Director of Engineering

SUBJECT:

CAPITAL IMPROVEMENT PROGRAM PROPOSED BUDGET FOR FY 2024-25 & 2025-26

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION:

Information Item.

BACKGROUND

Staff will present the proposed CIP budget to be included in the upcoming Fiscal Year 2024-25 & 2025-26 Budget recommendation.

RELEVANT STANDARDS

- Protect OC San assets
- Ensure the public's money is wisely spent

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- Presentation

70
1954 - 2024

Orange County
Sanitation District
70th Anniversary

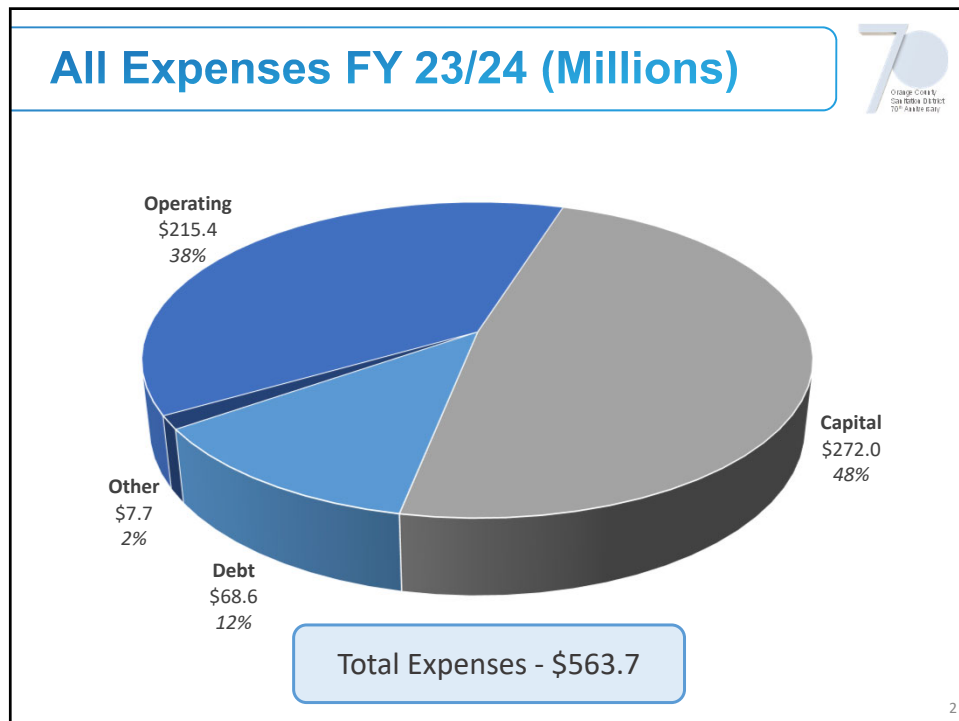
CAPITAL IMPROVEMENT PROGRAM PROPOSED BUDGET FOR FY 2024-25 & 2025-26

Presented by:
Justin Fenton, Engineering Manager

Operations Committee
May 1, 2024

Information Item

1



2

Capital Improvement Program (CIP)



The CIP includes all costs to plan, design, and construct capital facilities based on 4 key drivers:

- *Additional Capacity*
- *Regulations*
- *Strategic Initiative*
- *Rehabilitation & Replacement*



3

CIP – General Information



CIP includes:

- **\$4.72 Billion of Authorization**
- **121 Active projects**
- **24 Upcoming projects (not yet started)**
- **Capital Equipment**
- **56 Future projects (not authorized)**

PROJNO	Name	Phase	Sum of EAC
P2-128	Digester Replacement at Plant No. 2	05-Design	\$588,000,000
P1-140	Activated Sludge-1 Rehabilitation at Plant No. 1	04-Preliminary Des	\$470,000,000
P1-105	Headworks Rehabilitation at Plant 1	07-Construction	\$340,000,000
P2-133	B/C-Side Primary Sedimentation Basins Rehabilitation at Plant No. 2	01-Not Started	\$306,093,000
J-124	Digester Gas Facilities Rehabilitation	05-Design	\$190,000,000
P2-98	Primary Treatment Rehabilitation at Plant No. 2	07-Construction	\$188,000,000
P1-126	Primary Sedimentation Basins No. 3-5 Replacement at Plant No. 1	04-Preliminary Des	\$183,000,000
J-117	Ocean Outfall System Rehabilitation	07-Construction	\$170,300,000
P1-128	Headquarters Complex	07-Construction	\$169,500,000
S-67	Bay Bridge Pump Station Replacement	05-Design	\$146,000,000
3-67	Seal Beach Pump Station Replacement	07-Construction	\$134,000,000
P2-138	Operations and Maintenance Complex at Plant No. 2	04-Preliminary Des	\$126,500,000
3-68	Los Alamitos Sub-Trunk Extension and Westside Pump Station Abandonment	01-Not Started	\$119,600,000
P2-124	Interim Food Waste Receiving Facility	05-Design	\$6,300,000
P1-141	Administrative Facilities Demolition	03-Project Develop.	\$4,286,000
J-139	Process Control System Alarm Optimization	01-Not Started	\$4,121,000
S-68	Newport Beach Pump Station Pressurization Improvements	07-Construction	\$2,700,000
J-128	Project Management Information System	07-Construction	\$2,280,000
J-127	Natural Gas Pipelines Replacement at Plant Nos. 1 and 2	09-Close-Out	\$2,173,720
SP-195	Capital Improvement Program Management Services	03-Project Develop.	\$1,500,000
J-36-2	GWRS Final Expansion Coordination	07-Construction	\$1,400,000
3-66	Interstate 405 Widening Project Impacts on OCSD Sewers	07-Construction	\$500,000
Total			\$4,719,870,580

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Annual Update Process



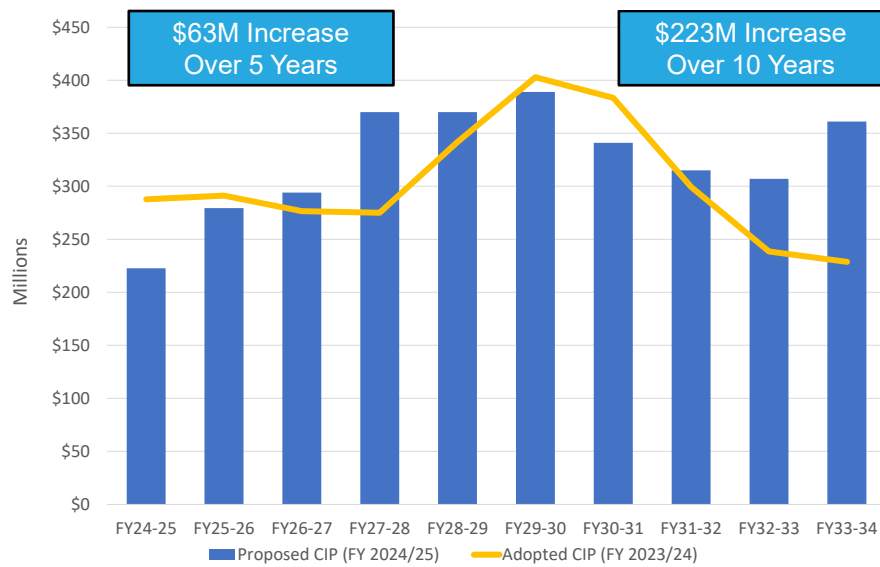
- Review all projects each year:

- Active Projects
 - Budget
 - Schedule
 - Duration
- Upcoming/Future Projects
 - Scope
 - Budget
 - Start Date
 - Duration



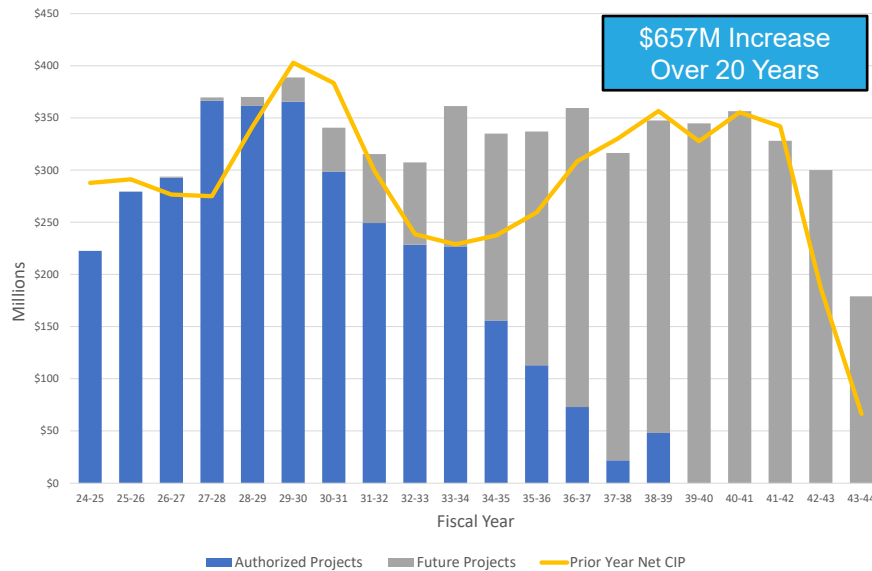
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10-Year Net CIP: \$3.25B



6

20-Year Net CIP: \$6.45B



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Top 15 Changes



Project #	Project Name	Budget Change	
P1-140	Activated Sludge-1 and Secondary Clarifier Rehabilitation	\$190,000,000	↑
P2-129	Digester P, Q, R, and S Replacement	(\$187,318,000)	↓
P2-119	Central Generation Rehabilitation at Plant No. 2	(\$45,989,000)	↓
7-69	North Tustin-Orange Sewer Improvements	\$45,103,000	↑
P2-138	Operations and Maintenance Complex at Plant No. 2.	\$42,500,000	↑
P1-127	Central Generation Rehabilitation at Plant No. 1	(\$39,784,000)	↓
P2-141	Headworks Electrical Distribution Improvements at Plant No. 2	\$34,652,000	NEW
J-135	Central Generation Engine Overhauls at Plant No. 1 and 2	\$28,200,000	↑
M-FE	Small Construction Projects Program	\$19,378,000	↑
11-33	Edinger Pump Station Replacement	\$19,200,000	↑
5-67	Bay Bridge Pump Station Replacement	\$18,000,000	↑
11-34	Slater Pump Station Rehabilitation	\$17,089,000	↑
7-70	Chapman - El Modena - Panorama Heights Sewer Rehab	(\$12,776,000)	↓
2-73	Fullerton - Placentia Sewer Facilities Demo and Rehab	\$11,315,000	↑
P1-142	Trickling Filter Media Replacement at Plant No. 1	(\$10,688,000)	↓

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P1-140: Activated Sludge 1 Rehab at P1

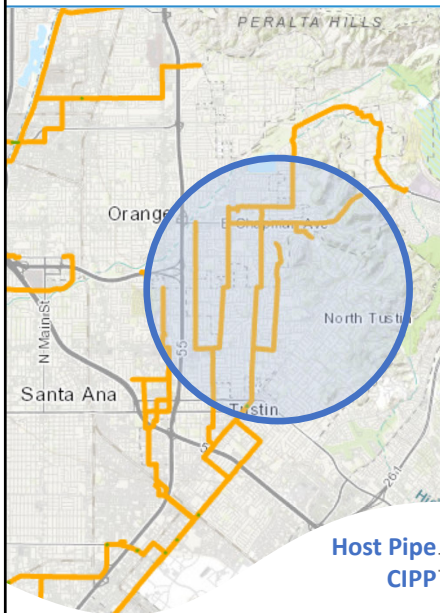


- Complete Rehab (1970s)
- Process Upgrade: Full Denitrification
- Add 20+ years of Life
- Cost Increase of \$190M
 - \$280M --> \$470M
 - Verified all Scope Elements
 - Condition Assessments
 - Updated Estimate

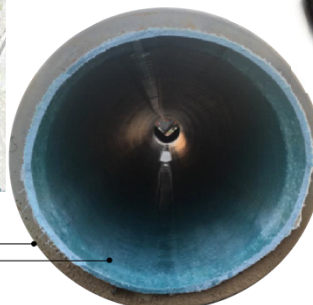


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7-69: N. Tustin-Orange Improvements



- Cost Increase of \$45.1M
- Rehab, Replacement, & Capacity
- Increased Scope:
 - Project No. 7-70 (\$12.8M)
 - Additional Assets
- Updated Estimate



Pipe Replacement
MH Rehab



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P2-138: Ops & Maint Complex at P2



- Former Project – \$84M
 - Replace the Operations Complex
 - Improve Maintenance Building
- Revised Project – \$126.5M
 - Single new O&M Complex
 - Improved coordination, proximity to process, seismic resilience, etc.



New O&M Complex



Operations Complex



Maintenance Building

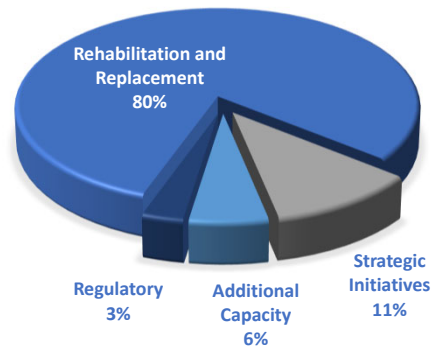
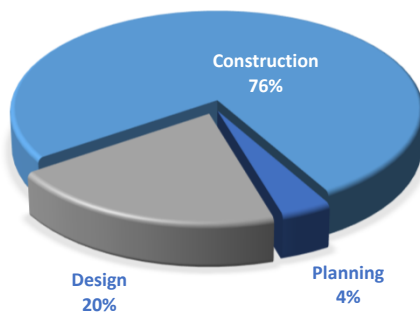
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Projected FY 2024-25 Net CIP



\$223 Million



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Summary



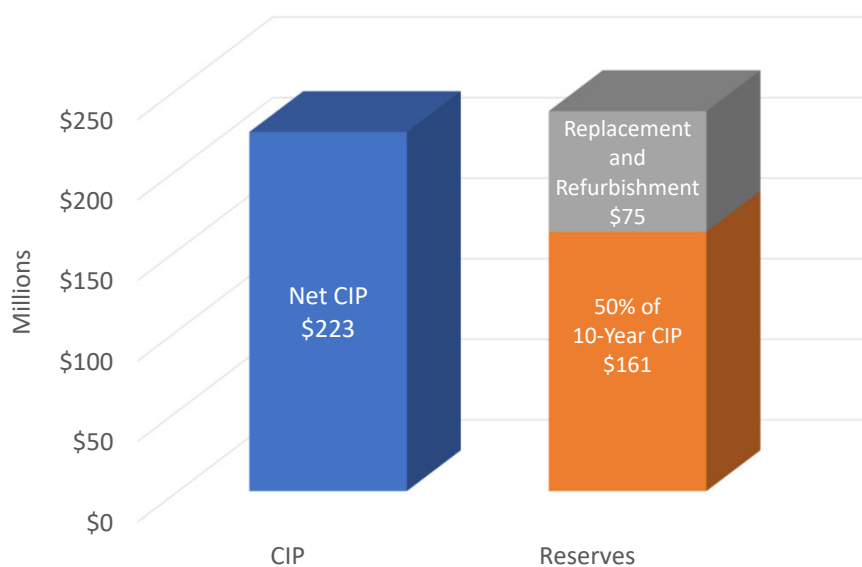
CAPITAL EXPENSES (Millions)

	Estimated FY 23-34	Proposed FY 24-25	Proposed FY 25-26
Capital Improvement Program	\$235	\$238.1	\$303
Capital Equipment	\$4.0	\$15	\$14
CIP Savings and Deferrals	(\$5.8)	(\$30)	(\$38)
Future Rehabilitation	-	-	\$0.2
Net Capital Expenses	\$233	\$223	\$279
Prior Budget	\$272	\$288	\$291
<i>Change from Prior Budget</i>	<i>(\$39)</i>	<i>(\$65)</i>	<i>(\$12)</i>
<i>Percentage of Prior Budget</i>	<i>86%</i>	<i>77%</i>	<i>96%</i>

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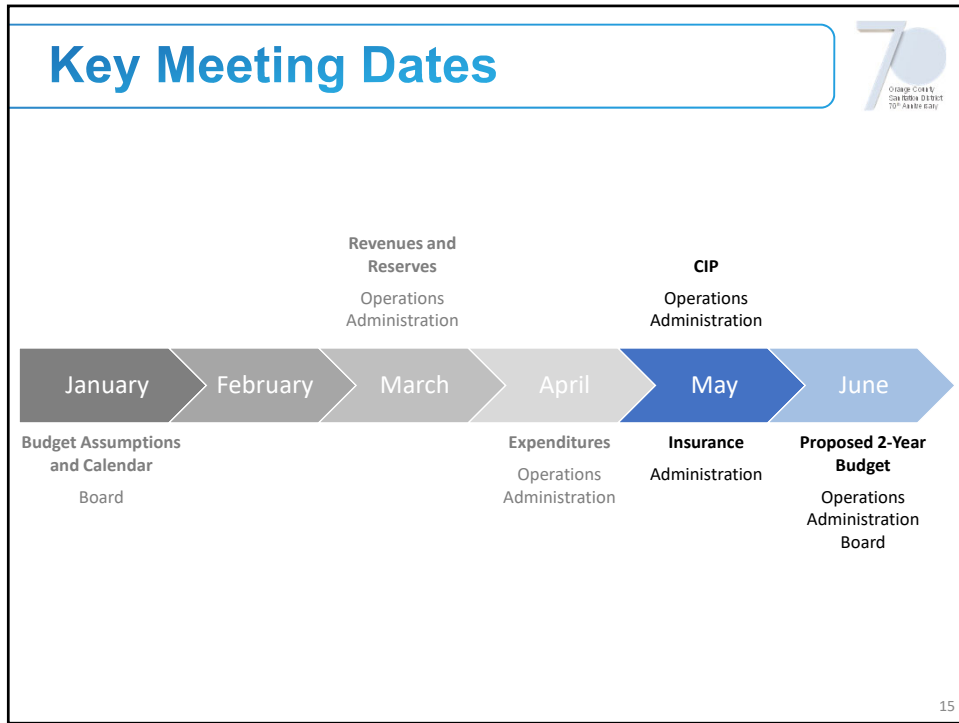
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FY 24/25 CIP Reserves

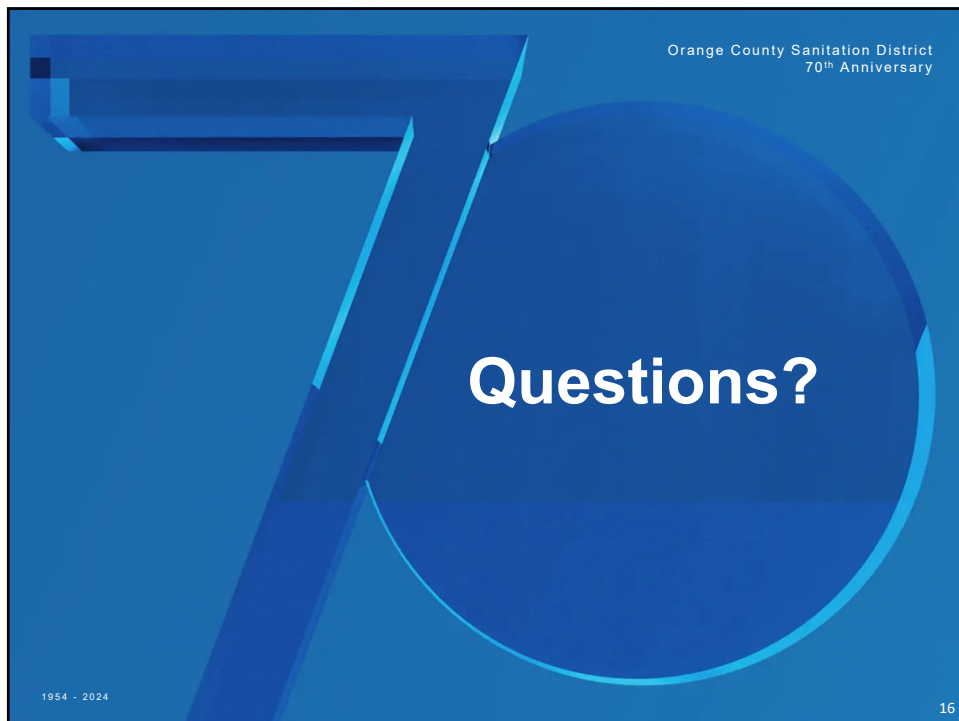


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ORANGE COUNTY SANITATION DISTRICT COMMON ACRONYMS

ACWA	Association of California Water Agencies	LOS	Level Of Service	RFP	Request For Proposal
APWA	American Public Works Association	MGD	Million Gallons Per Day	RWQCB	Regional Water Quality Control Board
AQMD	Air Quality Management District	MOU	Memorandum of Understanding	SARFPA	Santa Ana River Flood Protection Agency
ASCE	American Society of Civil Engineers	NACWA	National Association of Clean Water Agencies	SARI	Santa Ana River Interceptor
BOD	Biochemical Oxygen Demand	NEPA	National Environmental Policy Act	SARWQCB	Santa Ana Regional Water Quality Control Board
CARB	California Air Resources Board	NGOs	Non-Governmental Organizations	SAWPA	Santa Ana Watershed Project Authority
CASA	California Association of Sanitation Agencies	NPDES	National Pollutant Discharge Elimination System	SCADA	Supervisory Control And Data Acquisition
CCTV	Closed Circuit Television	NWRI	National Water Research Institute	SCAP	Southern California Alliance of Publicly Owned Treatment Works
CEQA	California Environmental Quality Act	O & M	Operations & Maintenance	SCAQMD	South Coast Air Quality Management District
CIP	Capital Improvement Program	OCCOG	Orange County Council of Governments	SOCWA	South Orange County Wastewater Authority
CRWQCB	California Regional Water Quality Control Board	OCHCA	Orange County Health Care Agency	SRF	Clean Water State Revolving Fund
CWA	Clean Water Act	OCSD	Orange County Sanitation District	SSMP	Sewer System Management Plan
CWEA	California Water Environment Association	OCWD	Orange County Water District	SSO	Sanitary Sewer Overflow
EIR	Environmental Impact Report	OOBS	Ocean Outfall Booster Station	SWRCB	State Water Resources Control Board
EMT	Executive Management Team	OSHA	Occupational Safety and Health Administration	TDS	Total Dissolved Solids
EPA	US Environmental Protection Agency	PCSA	Professional Consultant/Construction Services Agreement	TMDL	Total Maximum Daily Load
FOG	Fats, Oils, and Grease	PDSA	Professional Design Services Agreement	TSS	Total Suspended Solids
gpd	gallons per day	PFAS	Per- and Polyfluoroalkyl Substances	WDR	Waste Discharge Requirements
GWRS	Groundwater Replenishment System	PFOA	Perfluorooctanoic Acid	WEF	Water Environment Federation
ICS	Incident Command System	PFOS	Perfluorooctanesulfonic Acid	WERF	Water Environment & Reuse Foundation
IERP	Integrated Emergency Response Plan	POTW	Publicly Owned Treatment Works	WIFIA	Water Infrastructure Finance and Innovation Act
JPA	Joint Powers Authority	ppm	parts per million	WIIN	Water Infrastructure Improvements for the Nation Act
LAFCO	Local Agency Formation Commission	PSA	Professional Services Agreement	WRDA	Water Resources Development Act

ORANGE COUNTY SANITATION DISTRICT GLOSSARY OF TERMS

ACTIVATED SLUDGE PROCESS – A secondary biological wastewater treatment process where bacteria reproduce at a high rate with the introduction of excess air or oxygen and consume dissolved nutrients in the wastewater.

BENTHOS – The community of organisms, such as sea stars, worms, and shrimp, which live on, in, or near the seabed, also known as the benthic zone.

BIOCHEMICAL OXYGEN DEMAND (BOD) – The amount of oxygen used when organic matter undergoes decomposition by microorganisms. Testing for BOD is done to assess the amount of organic matter in water.

BIOGAS – A gas that is produced by the action of anaerobic bacteria on organic waste matter in a digester tank that can be used as a fuel.

BIOSOLIDS – Biosolids are nutrient rich organic and highly treated solid materials produced by the wastewater treatment process. This high-quality product can be recycled as a soil amendment on farmland or further processed as an earth-like product for commercial and home gardens to improve and maintain fertile soil and stimulate plant growth.

CAPITAL IMPROVEMENT PROGRAM (CIP) – Projects for repair, rehabilitation, and replacement of assets. Also includes treatment improvements, additional capacity, and projects for the support facilities.

COLIFORM BACTERIA – A group of bacteria found in the intestines of humans and other animals, but also occasionally found elsewhere, used as indicators of sewage pollution. E. coli are the most common bacteria in wastewater.

COLLECTIONS SYSTEM – In wastewater, it is the system of typically underground pipes that receive and convey sanitary wastewater or storm water.

CERTIFICATE OF PARTICIPATION (COP) – A type of financing where an investor purchases a share of the lease revenues of a program rather than the bond being secured by those revenues.

CONTAMINANTS OF POTENTIAL CONCERN (CPC) – Pharmaceuticals, hormones, and other organic wastewater contaminants.

DILUTION TO THRESHOLD (D/T) – The dilution at which the majority of people detect the odor becomes the D/T for that air sample.

GREENHOUSE GASES (GHG) – In the order of relative abundance water vapor, carbon dioxide, methane, nitrous oxide, and ozone gases that are considered the cause of global warming ("greenhouse effect").

GROUNDWATER REPLENISHMENT SYSTEM (GWRS) – A joint water reclamation project that proactively responds to Southern California's current and future water needs. This joint project between the Orange County Water District and OCSD provides 70 million gallons per day of drinking quality water to replenish the local groundwater supply.

LEVEL OF SERVICE (LOS) – Goals to support environmental and public expectations for performance.

N-NITROSODIMETHYLAMINE (NDMA) – A N-nitrosamine suspected cancer-causing agent. It has been found in the GWRS process and is eliminated using hydrogen peroxide with extra ultra-violet treatment.

NATIONAL BIOSOLIDS PARTNERSHIP (NBP) – An alliance of the NACWA and WEF, with advisory support from the EPA. NBP is committed to developing and advancing environmentally sound and sustainable biosolids management practices that go beyond regulatory compliance and promote public participation to enhance the credibility of local agency biosolids programs and improved communications that lead to public acceptance.

PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) – A large group (over 6,000) of human-made compounds that are resistant to heat, water, and oil and used for a variety of applications including firefighting foam, stain and water-resistant clothing, cosmetics, and food packaging. Two PFAS compounds, perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) have been the focus of increasing regulatory scrutiny in drinking water and may result in adverse health effects including developmental effects to fetuses during pregnancy, cancer, liver damage, immunosuppression, thyroid effects, and other effects.

PERFLUOROOCTANOIC ACID (PFOA) – An ingredient for several industrial applications including carpeting, upholstery, apparel, floor wax, textiles, sealants, food packaging, and cookware (Teflon).

PERFLUOROOCTANESULFONIC ACID (PFOS) – A key ingredient in Scotchgard, a fabric protector made by 3M, and used in numerous stain repellents.

PLUME – A visible or measurable concentration of discharge from a stationary source or fixed facility.

PUBLICLY OWNED TREATMENT WORKS (POTW) – A municipal wastewater treatment plant.

SANTA ANA RIVER INTERCEPTOR (SARI) LINE – A regional brine line designed to convey 30 million gallons per day of non-reclaimable wastewater from the upper Santa Ana River basin to the ocean for disposal, after treatment.

SANITARY SEWER – Separate sewer systems specifically for the carrying of domestic and industrial wastewater.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD) – Regional regulatory agency that develops plans and regulations designed to achieve public health standards by reducing emissions from business and industry.

SECONDARY TREATMENT – Biological wastewater treatment, particularly the activated sludge process, where bacteria and other microorganisms consume dissolved nutrients in wastewater.

SLUDGE – Untreated solid material created by the treatment of wastewater.

TOTAL SUSPENDED SOLIDS (TSS) – The amount of solids floating and in suspension in wastewater.

ORANGE COUNTY SANITATION DISTRICT GLOSSARY OF TERMS

TRICKLING FILTER – A biological secondary treatment process in which bacteria and other microorganisms, growing as slime on the surface of rocks or plastic media, consume nutrients in wastewater as it trickles over them.

URBAN RUNOFF – Water from city streets and domestic properties that carry pollutants into the storm drains, rivers, lakes, and oceans.

WASTEWATER – Any water that enters the sanitary sewer.

WATERSHED – A land area from which water drains to a particular water body. OCSD's service area is in the Santa Ana River Watershed.