



SPECIAL NOTICE
PUBLIC ATTENDANCE & PARTICIPATION AT PUBLIC MEETINGS
Operations Committee Meeting
Wednesday, April 3, 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: 778 715 021#

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!

March 27, 2024

NOTICE OF REGULAR MEETING

**OPERATIONS COMMITTEE
ORANGE COUNTY SANITATION DISTRICT**

Wednesday, April 3, 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, April 3, 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
04/03/24	04/24/24
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

** 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: April 3, 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, April 3, 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:

Your participation is always welcome. Specific information as to how to participate in a meeting is detailed in the Special Notice attached to this agenda. In general, OC San offers several ways in which to interact during meetings: 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.

REPORTS:

The 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 [2024-3522](#)**RECOMMENDATION:**

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

Originator: Kelly Lore

Attachments: [Agenda Report](#)
[03-06-2024 Operations Committee Minutes](#)

2. REFURBISHMENT OF COMBINATION SEWER CLEANING TRUCK [2024-3533](#)

RECOMMENDATION: 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%).

Originator: Riaz Moinuddin

Attachments: [Agenda Report](#)

**3. POWER BUILDINGS 7 AND 8 HVAC REPLACEMENT AT PLANT NO. 1, [2024-3532](#)
PROJECT NO. FE23-08**

RECOMMENDATION: 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%).

Originator: Riaz Moinuddin

Attachments: [Agenda Report](#)
[Master Turnkey Agreement](#)

NON-CONSENT:

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

RECOMMENDATION: 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%).

Originator: Mike Dorman

Attachments: [Agenda Report](#)
[Services Contract-Innovative Construction Solutions
FE23-01 Supplemental Attachment](#)

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

RECOMMENDATION: 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.

Originator: Mike Dorman

Attachments: [Agenda Report Agreement Presentation - Project No. 3-64C Forest Lawn Agreement](#)

INFORMATION ITEMS:

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

RECOMMENDATION:

Information Item.

Originator: Wally Ritchie

Attachments: [Agenda Report FY2024-25 and 2025-26 Budget Expense Update FY 2024-25 and 2025-26 Budget Expense Summary Presentation - Operating Budget Expenditures FY24-25 & 25-26](#)

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

RECOMMENDATION:

Information Item.

Originator: Mike Dorman

Attachments: [Agenda Report Presentation - P2-128 Update](#)

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 May 1, 2024 at 5:00 p.m.



OPERATIONS COMMITTEE

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

Agenda Report

File #: 2024-3522

Agenda Date: 4/3/2024

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 March 6, 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:

- March 6, 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, March 6, 2024 at 5:00 p.m. in the Administration Building of the Orange County Sanitation District. Director Doug Chaffee led the pledge of allegiance.

ROLL CALL AND DECLARATION OF QUORUM:

The Clerk of the Board declared a quorum present as follows:

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

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; Kelly Lore, Clerk of the Board; Mo Abiodun; Daniel Berokoff; Jennifer Cabral; Tanya Chong; Rudy Davila; Thys DeVries; Martin Dix; Brian Engeln; Justin Fenton; Al Garcia; Marianne Klein; Tina Knapp; Giti Radvar; Valerie Ratto; Kevin Schuler; Eros Yong; and Ruth Zintzun were present in the Board Room.

OTHERS PRESENT: Omar Sandoval, Associate Counsel, and Jesus Gaona Perez were present in the Board Room.

PUBLIC COMMENTS:

None.

REPORTS:

Chair Dumitru did not provide a report.

General Manager Rob Thompson introduced Director of Engineering Mike Dorman who announced that Engineering Manager Eros Yong will be retiring and that Engineering Manager Martin Dix will assume the duties of the Project Management Office.

CONSENT CALENDAR:**1. APPROVAL OF MINUTES**[2024-3501](#)**Originator:** Kelly Lore

MOVED, SECONDED, AND DULY CARRIED TO:

Approve minutes of the Regular meeting of the Operations Committee held February 7, 2024.

AYES: Joyce Ahn, Debbie Baker, Doug Chaffee, Jon Dumitru, Ryan Gallagher, Stephen Faessel, Phil Hawkins, Stephanie Klopfenstein, Scott Minikus, Robert Ooten, Schelly Sustarsic and Bruce Whitaker**NOES:** None**ABSENT:** Johnathan Ryan Hernandez and Chad Wanke**ABSTENTIONS:** None**2. NEWPORT BEACH PUMP STATION PRESSURIZATION IMPROVEMENTS, PROJECT NO. 5-68**[2024-3498](#)**Originator:** Mike Dorman

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

Approve a contingency increase of \$65,625 (7%) to the existing construction contract with Innovative Construction Solutions for Newport Beach Pump Station Pressurization Improvements, Project No. 5-68, for a total contract amount not to exceed \$937,500; and a total construction contingency of \$159,375 (17%).

AYES: Joyce Ahn, Debbie Baker, Doug Chaffee, Jon Dumitru, Ryan Gallagher, Stephen Faessel, Phil Hawkins, Stephanie Klopfenstein, Scott Minikus, Robert Ooten, Schelly Sustarsic and Bruce Whitaker**NOES:** None**ABSENT:** Johnathan Ryan Hernandez and Chad Wanke**ABSTENTIONS:** None**3. OVERHAUL ON THREE TURBOCHARGERS AT CENTRAL GENERATION ENGINES AT PLANT NO. 2**[2024-3489](#)**Originator:** Riaz Moinuddin

MOVED, SECONDED, AND DULY CARRIED TO:

A. Approve a Sole Source Purchase Order to Cooper Machinery Services for a complete rebuild of three turbochargers for the Central Generation Engines at Plant No. 2 for a total amount not to exceed \$225,000, including applicable taxes and freight; and

B. Approve a contingency of \$22,500 (10%).

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

NOES: None

ABSENT: Johnathan Ryan Hernandez and Chad Wanke

ABSTENTIONS: None

4. **PRIMARY EFFLUENT PUMP STATION PUMP #3 REBUILD AT PLANT NO. 1** [2024-3487](#)

Originator: Riaz Moinuddin

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

A. Approve additional funds of \$244,601 to Sole Source Purchase Order 161427-OS, to DXP Enterprises, Inc. (formerly Cortech Engineering, Inc.), to rebuild Primary Effluent Pump Station Pump #3 at Plant No. 1, for a new total amount not to exceed \$322,061; and

B. Approve a contingency of \$32,206 (10%).

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

NOES: None

ABSENT: Johnathan Ryan Hernandez and Chad Wanke

ABSTENTIONS: None

NON-CONSENT:

5. **CENGEN PLANT WATER PIPE REPLACEMENT AT PLANT NO. 1, PROJECT NO. FE19-02** [2024-3500](#)

Originator: Mike Dorman

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

- A. Receive and file the Bid Tabulation and Recommendation for CenGen Plant Water Pipe Replacement at Plant No. 1, Project No. FE19-02;
- B. Award a Construction Contract to Innovative Construction Solutions for CenGen Plant Water Pipe Replacement at Plant No. 1, Project No. FE19-02, for a total amount not to exceed \$3,385,000; and
- C. Approve a contingency of \$338,500 (10%).

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

NOES: None

ABSENT: Johnathan Ryan Hernandez and Chad Wanke

ABSTENTIONS: None

Director Johnathan Ryan Hernandez arrived at the meeting at 5:21 p.m.

6. ENGINEERING PROGRAM CONTRACT PERFORMANCE REPORT [2024-3408](#)

Originator: Mike Dorman

Mr. Dorman introduced Engineering Manager Martin Dix who provided a PowerPoint presentation regarding the Engineering Program Contract Performance Report which included an overview of the Capital Improvement Program, contract types, construction contracts, cumulative change order rates, engineering design and related services, master budget projects, supplemental engineering service contracts, programming professional service contracts, and on-call service agreements.

WITHOUT OBJECTION, ITEM WAS RECEIVED AND FILED.

Receive and file the Engineering Program Contract Performance Report for the period ending December 31, 2023.

INFORMATION ITEMS:

7. FY 2024-25 AND 2025-26 ORANGE COUNTY SANITATION DISTRICT BUDGET REVENUES AND RESERVES OVERVIEW [2024-3393](#)

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 the FY 2024-25 and FY 2025-26 revenues and reserves which included an overview of the four major revenue categories: fees and charges, general and other income, and debt financing. Ms. Zintzun also provided an overview of the reserve policy and key meeting dates.

ITEM RECEIVED AS AN:

Information Item.

DEPARTMENT HEAD REPORTS:

None.

CLOSED SESSION:

None.

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

In response to a question from Director Stephen Faessel, Mr. Thompson announced that OC San's 70th anniversary is in June 2024; and a Community Open House will be held on June 8, 2024 to celebrate the milestone.

BOARD OF DIRECTORS INITIATED ITEMS FOR A FUTURE MEETING:

None.

ADJOURNMENT:

Chair Dumitru declared the meeting adjourned at 5:31 p.m. to the next Regular Operations Committee meeting to be held on Wednesday, April 3, 2024 at 5:00 p.m.

Submitted by:

Kelly A. Lore, MMC
Clerk of the Board



OPERATIONS COMMITTEE

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

Agenda Report

File #: 2024-3533

Agenda Date: 4/3/2024

Agenda Item No: 2.

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

SUBJECT:

REFURBISHMENT OF COMBINATION SEWER CLEANING TRUCK

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION: 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%).

BACKGROUND

Orange County Sanitation District (OC San) owns and operates three Combination Sewer Cleaning trucks within its fleet. The trucks maintain the collection system by cleaning sewer pipes and pump station wet wells and responding to emergencies such as sewer spills using a combination of vacuum and water jetting technology. The Combination Sewer Cleaning trucks consist of complex equipment with controls, hydraulic systems, and a large tank debris body mounted on a chassis. The trucks service approximately 388 miles of regional pipes and 15 outlying pump stations, for which three trucks are needed to complete the volume of work annually and comply with the SSMP, as the SWRCB requires.

The OC San Board of Directors approved the replacement of this sewer cleaning truck in September 2023. The replacement truck is tentatively scheduled for delivery in February 2025. In view of new clean air regulations and in an effort to save substantially on equipment rental cost while any of the three duty units are being serviced, staff now recommends the refurbishment of this unit to serve as a swing unit whenever one of the other three units are unavailable.

RELEVANT STANDARDS

- Participate in local, state, and national cooperative purchasing programs
- Maintain a proactive asset management program
- Ensure the public's money is wisely spent

PROBLEM

The truck identified for refurbishment is exhibiting increased failures and advanced corrosion within the onboard systems. Electrical, mechanical, and hydraulic systems are at the end of their useful life. Repair efforts are continuous to the point that rehabilitation or replacement are the only options remaining.

PROPOSED SOLUTION

Refurbish the identified Combination Sewer Cleaning truck that is aging to near-new specifications through the Original Equipment Manufacturer (OEM) authorized service representative to regain reliability and ensure the intended useful life of the equipment can be achieved cost-effectively.

TIMING CONCERNS

The Combination Sewer Cleaning truck maintains the collection system by cleaning sewer pipes and pump station wet wells and responding to emergencies such as sewer spills. Without the repairs requested, response time to address issues within the collection system will be potentially impacted.

RAMIFICATIONS OF NOT TAKING ACTION

The truck needing refurbishment is unreliable, deteriorating, and is not likely to meet its intended useful life without refurbishment. The increased need for rental equipment during continuous repairs could further increase costs to maintain the vehicle.

PRIOR COMMITTEE/BOARD ACTIONS

September 2023 - Approved a Purchase Order to Haaker Equipment Company to purchase one new/unused Combination Sewer Cleaning Truck using Sourcewell Cooperative No. 101221-VTR for a total amount not to exceed \$973,913, including freight and taxes; and approved a contingency of \$29,217 (3%).

August 2017 - Approved the addition of Vactor to the pre-approve OEM Sole Source List for Industrial Cleaning Truck rental and repair.

ADDITIONAL INFORMATION

OC San's Board of Directors approved Vactor as the OEM sole source provider on August 23, 2017. Haaker Equipment Company is Vactor's sole authorized dealer for Vactor in Southern California. By using the OEM authorized dealer and OEM parts, OC San received a discount of \$14,482.

The truck profiled for refurbishment is nine years old and has a reliably operating chassis. The installed equipment on the chassis will be restored to near-new conditions, allowing OC San to operate the unit well into its profiled life cycle of 15 years.

With newly adopted and imposed regulations (Advanced Clean Fleets) affecting heavy-duty vehicles, the unit would need to be replaced as an alternative fueled/electric vehicle at a substantially higher cost in a market with supply chain delays. Keeping this unit in OC San's fleet provides the reliability

of critical equipment to maintain the collection system, while providing fuel diversity of equipment and a cost-effective means to allow the market to ramp up regulatory-driven alternative fuel options.

A 15% contingency is recommended should additional repair work be needed during the overhaul process.

CEQA

N/A

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, Section A, Page A-16, Fleet Services) and the budget is sufficient for the recommended action.

<u>Date of Approval</u>	<u>Contract Amount</u>	<u>Contingency</u>
04/24/2024	\$300,320	\$45,048 (15%)

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



OPERATIONS COMMITTEE

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

Agenda Report

File #: 2024-3532

Agenda Date: 4/3/2024

Agenda Item No: 3.

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

SUBJECT:

POWER BUILDINGS 7 AND 8 HVAC REPLACEMENT AT PLANT NO. 1, PROJECT NO. FE23-08

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION: 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%).

BACKGROUND

Orange County Sanitation District's (OC San) Power Buildings 7 and 8 at Plant No. 1 utilize two heating, ventilation, and air conditioning (HVAC) units to maintain climate control and humidity for critical electrical equipment. Power Building 7 supplies electrical power to the primary clarifiers and Phys Chem Polymer Station, while Power Building 8 feeds all trickling filters and support equipment. Both buildings' units have reached the end of life.

RELEVANT STANDARDS

- 24/7/365 treatment plant reliability
- Maintain a proactive asset management program
- Comply with environmental permit requirements
- Participate in local, state, and national cooperative purchasing programs

PROBLEM

The existing HVAC and condensing units have reached the end of their useful life.

PROPOSED SOLUTION

Replace the in-kind HVAC units through a Master Turnkey Agreement with Trane U.S. Inc. utilizing the OMNIA Partners Cooperative Purchasing Agreement Contract No. 3341. The approval of this Master Turnkey Agreement is a cost-effective way to replace the equipment in a timely manner.

TIMING CONCERNS

If this action is delayed, OC San will continue to be vulnerable to the loss of electrical equipment within the two buildings that power critical treatment processes.

RAMIFICATIONS OF NOT TAKING ACTION

Process equipment failures can cause plant disruptions and delays which can lead to regulatory permits compliance issues.

PRIOR COMMITTEE/BOARD ACTIONS

N/A

ADDITIONAL INFORMATION

OC San is utilizing a cooperative agreement through OMNIA Partners, formerly U.S. Communities, which is the largest cooperative purchasing organization for public sector procurement. This agreement was awarded using a competitive bid process similar to OC San's and has been vetted by the Purchasing Division. The collective buying power of the unified purchasing cooperatives typically deliver value and savings for public agencies nationwide.

Trane U.S. Inc. was selected to propose on this cooperative agreement because they can provide equipment that matches the existing and fits within the existing footprint. They also provide the equipment at discounts of up to 65% of the list price.

Staff evaluated the proposal in accordance with OC San's policies and procedures and, based on these results, recommends approving the Purchase Order and a Master Turnkey Agreement with Trane U.S. Inc.

CEQA

The project is exempt from CEQA under the Class 1 categorical exemptions set forth in California Code of Regulations Section 15301. A Notice of Exemption will be filed with the OC Clerk-Recorder after OC San Board of Directors approval of the Agreement.

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-8, Small Construction Projects Program, Project No. M-FE) and the budget is sufficient for the recommended action.

<u>Date of Approval</u>	<u>Contract Amount</u>	<u>Contingency</u>
04/24/2024	\$687,708	\$34,386 (5%)

ATTACHMENT

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

- Master Turnkey Agreement

RM:kp:ls



Orange County Sanitation District and Trane

This **Master Turnkey Agreement** (this “Agreement”) is made as of the 24 Day of April 2024 (“Effective Date”) by and between **Trane U.S. Inc.**, (hereinafter referred to as “Contractor” or “Trane”) and **Orange County Sanitation District** whose principal office is located at 10844 Ellis Avenue Fountain Valley, CA 92708 (hereinafter referred to as “Customer”).

RECITALS

WHEREAS, Contractor is in the business of manufacturing, installing, commissioning and maintaining certain HVAC and other equipment and/or services. Customer desires to utilize Contractor to furnish installation services at one or more sites as defined in a Work Order to be issued pursuant hereto; and

WHEREAS, Contractor has agreed to perform the work and services pursuant to the Racine County, WI, Contract Number 3341 entitled “HVAC Products, Installation, Labor Based Solutions, and Related Products and Services” made available for piggybacking through OMNIA Partners, Public Sector (the “Piggyback Contract”) ; and

WHEREAS, Contractor and Customer have agreed to enter into this Agreement to set forth the terms and conditions for Contractor’s construction services at Customer’s facilities as defined in one or more Work Orders (hereinafter the “Work”) to be executed hereunder. This Agreement provides the standard terms and conditions that will apply with respect to each Work Order and Customer Project. Pursuant to individual Work Orders issued pursuant and subject to this Agreement, a form of which Work Order is attached hereto as Exhibit A, Contractor and Customer will set forth their specific agreement with respect to certain additional contractual terms for each Customer Project, including price, schedule for completion, and scope of the Work to be performed by Contractor pursuant to the Work Order.

NOW, THEREFORE, in consideration of the foregoing and the mutual covenants contained herein, the parties agree as follows:

Definitions. As used throughout the Contract Documents, the following terms when capitalized shall have the designated meanings and other terms used herein but not defined below shall have the meanings ascribed to them throughout this Agreement:

“**Applicable Laws**” means all laws, building codes, rules, regulations, or orders of any federal, state, county, local, or other governmental body, agency or other authority having jurisdiction over the Site, or the performance of the Work at the Site, as may be in effect from time to time.

“**Certificate of Final Completion**” means the form of Certificate of Final Completion attached hereto as Exhibit E-2.

“**Certificate of Substantial Completion**” means the form of Certificate of Substantial Completion attached hereto as Exhibit E-1.

“**Completion Date**” (or the plural thereof) means the dates specified in the Work Order for Contractor’s achievement of Substantial Completion and/or Final Completion, subject to any extensions thereof as provided in this Agreement.

“**Contract Documents**” refers to, collectively, this Agreement, any Work Order mutually executed pursuant to this Agreement, any Change Orders issued hereunder and all plans, specifications, and addenda, and the Piggyback Contract.

“**Contract Time**” means the amount of time specified in each Work Order for the full and complete performance of the Work that is the subject of each Work Order.



“Customer Project” means the entirety of the Work to be performed by Contractor under this Agreement and the applicable Work Order.

“Day” as used in the Contract Documents shall mean calendar day unless otherwise specifically stated.

“Final Completion” means the full completion of the Work as required by the Contract Documents, as evidenced by Contractor’s written acceptance of the completed Work in accordance with the provisions of Section 2.06 of this Subcontract.

“Premises” or **“Site”** means the building, office space, business location, or other location where the Work is to be performed or furnished that is the subject of a Work Order, as more fully described in Attachment C to the applicable Work Order.

“Contract Price” means the lump sum amount specified in each Work Order that is payable by Customer to Contractor in consideration for the performance of the Work as described in of each Work Order. Contract Price shall also include other compensation to be paid to Contractor in consideration of the Work, including but not limited to agreed-upon unit prices.

“Contract Time” means the period of time, including authorized adjustments, allotted for Subcontractor to achieve Substantial Completion of the Work by the Substantial Completion date specified on the Work Order.

“Substantial Completion” means the stage in the progress of the Work when the Work is sufficiently complete so that Owner can occupy or utilize the Work for its intended use.

“Work” or the **“Services”** means the complete performance of the scope of Work specified in the Work Order at the Site and includes all labor necessary to produce, furnish, and/or install such services, all materials, fabrications, assemblies, and equipment (excluding Contractor supplied equipment) incorporated or to be incorporated in such Work, except as specifically set forth in an applicable Work Order.

“Work Order” means the document mutually executed by the parties that sets forth Contractor’s and Customer’s specific agreement with respect to terms that are unique for the Work to be performed, substantially in the form of the sample form of the Work Order attached hereto as Exhibit A. The Work Order shall be executed by both Contractor and Customer.

Words and abbreviations that have well-known technical or trade meanings are used in the Contract Documents in accordance with such recognized meanings.

ARTICLE 1 - THE SERVICES AND COMPENSATION

Section 1.01 Work Orders. For each Customer Project for which Contractor is to perform Work, Contractor and Customer shall execute a Work Order.

Section 1.01. Contract Price. Subject to the terms and conditions hereof, as payment for Trane’s performance and furnishing of the Services (as defined below) at the Premises identified in Attachment C to the applicable Work Order, Customer shall pay or cause to be paid to Trane, in accordance with the dates and amounts on Attachment A to the applicable Work Order pursuant to Section 1.04, the sum of Six Hundred Eighty Seven Thousand Seven Hundred Eight dollars (\$687,708.00) Unless otherwise provided in the applicable Work Order, the Contract Price excludes all sales, consumer, use and similar taxes (excluding income taxes) for the Services. It is understood that pricing shall be based pursuant to the Piggyback Contract subject to adjustments that may be necessary for the payment of prevailing wages pursuant to Section 7.13 below. The Piggyback Contract is hereby incorporated in its entirety by this reference, provided that the terms of this Agreement and any Work Order and Change Order under this Agreement shall take precedence in the event of any conflict between this Agreement and the provisions of the Piggyback Contract.

Section 1.02. The Services and Exclusions. No later than 298 working days after the date of Contract Execution, Trane shall have designed and substantially completed installation of the equipment and performance of the work and services described in Attachment B to the applicable Work Order (hereinafter, collectively, the “Work” or the “Services”). Trane’s obligation hereunder is limited to the Services as defined herein. Excluded from the Services are any modifications or alterations to the Premises (not expressly included within the Services as defined) that may be required by operation of the Americans With Disabilities Act or any other law or building code(s).

Section 1.03. Construction Procedures and Changes to Services. Trane shall supervise and direct the Services using its best skill and attention. Trane shall have exclusive control over construction means, methods, techniques, sequences and procedures. Trane shall at all times have the right to replace, delete or substantially alter any item of equipment or part of the Services, correct any work, or revise any procedures included in this Agreement, provided, however, that Trane shall obtain Customer’s prior consent to substantial deviations from the original scope of Services, said consent not to be reasonably withheld or delayed.

Section 1.04. Payment Terms. Customer shall pay Trane or cause Trane to be paid for the Services as follows:

(a) **Initial Payment:** Upon execution hereof, 15% of the Contract Price (for engineering, drafting and other mobilization costs incurred prior to on-site installation) shall be due; and

(b) **Progress and Final Payments:** Trane will invoice in accordance with Exhibit A for all materials and equipment delivered to the Premises (or, as applicable, to an off-site storage facility) and for all installation, labor and services performed during the billing period; Customer shall pay all amounts due net thirty (30) days of the itemized invoice for work completed and any invoice not paid within thirty (30) calendar days of its date shall be past due.

Section 1.05. Substantial Completion and Final Completion.

(a) **Substantial Completion.** When Trane considers that the Services, or a portion thereof, are substantially complete, Trane will submit to Customer a proposed “punch list” listing items of the Services to be completed prior to final completion. Customer and Trane shall inspect the Services (or portion thereof) to determine if the same is substantially complete. (Substantial Completion is defined as the stage in the progress of the Services (or designated portion thereof) when the Services are sufficiently complete so that Customer can occupy or utilize the Services for its intended use.) Customer and Trane shall add to the punch list any item of work that has not been completed. When the Services (or designated portion thereof) are substantially complete, Customer and Trane shall execute a Certificate of Substantial Completion in the form of Exhibit D.1, setting forth the date of Substantial Completion and shall state the date by which Trane shall complete the items of work included on the punch list.

(b) **Final Completion.** Upon Customer’s receipt of written notice from Trane that the installation work included in the Services is ready for final inspection and acceptance, Customer and Trane shall inspect the installation work and determine whether the same has been performed in accordance with this Agreement. If Customer considers the installation work to have been performed in accordance with this Agreement, Customer shall issue a Certificate of Final Completion and Acceptance, substantially in the form attached hereto as Exhibit D.2, to be executed by an authorized representative of Customer. In the event Trane presents a Certificate of Final Completion and Acceptance to Customer for execution and, within fourteen (14) calendar days from the date noted in the Certificate as the date of such presentation, Customer fails to deliver an executed original of the Certificate to Trane and does not provide to Trane written objections to issuance of the Certificate, providing specific facts as to why the Services have not been finally completed, the Date of Final Completion shall be the date noted in the Certificate as the date the Certificate was submitted to Customer.

Section 1.06. Delays. If Trane is delayed in the commencement or completion of any part of the Services due to events beyond Trane’s control (including, but not limited to, fire, flood, labor disputes, unusual delays in deliveries,



unavoidable casualties, abnormal adverse weather, and acts of God), or due to Customer's action(s) or failure to perform its obligations under this Agreement or to cooperate with Trane in the timely performance of the Services, then Trane will notify Customer in writing of the existence, extent of, and reason(s) for such delay(s). Trane and Customer shall extend the contract time and/or increase the Contract Price by Change Order for such reasonable time and/or amount as they shall agree.

Section 1.07. Equipment Location and Access. Customer shall provide, without charge, a mutually satisfactory location or locations for the installation and operation of the equipment and the performance of the installation work, including sufficient areas for staging, mobilization, and storage. Customer shall provide access to the Premises for Trane and its contractors or subcontractors during regular business hours, or such other hours as may be requested by Trane and acceptable to Customer, to install, adjust, inspect, and correct the installation work. Trane's access to correct any emergency condition shall not be restricted by Customer.

Section 1.08. Permits and Governmental Fees. Trane shall secure (with Customer's assistance) and pay for building and other permits and governmental fees, licenses, and inspections necessary for proper performance and completion of the installation work and which are legally required when bids from Trane's subcontractors are received, negotiations thereon concluded, or the effective date of a relevant Change Order, whichever is later. Customer is responsible for necessary approvals, easements, assessments and charges for construction, use or occupancy of permanent structures or for permanent changes to existing facilities.

Section 1.09. Utilities During Construction. At no cost to Trane, Customer shall provide and pay for water, heat, and utilities consumed by Trane during performance of the Services hereunder. Trane shall install and pay the cost of any temporary facilities not already in existence, which will be required during construction for accessing such water, heat, and utilities.

Section 1.10. Concealed or Unknown Conditions. In the performance of the installation work, if Trane encounters conditions at the Premises that are (i) subsurface or otherwise concealed physical conditions that differ materially from those indicated on the drawings or (ii) unknown physical conditions of an unusual nature that differ materially from those conditions ordinarily found to exist and generally recognized as inherent in construction activities of the type and character as the installation work, Trane shall notify Customer of such conditions as promptly as practicable, prior to significantly disturbing the same. If such conditions differ materially and cause an increase in Trane's cost of, or time required for, performance of any part of the Services, Trane shall be entitled to, and Customer shall consent by Change Order to, an equitable adjustment in the Contract Price, Contract Time, or both.

Section 1.11. Damage to Equipment; Casualty or Condemnation of Premises. (a) If any fire, flood, other casualty, or condemnation renders a majority of the Premises incapable of being occupied and the affected portion is not reconstructed or restored within ninety (90) days from the date of such casualty or condemnation, Trane may terminate this Agreement by delivery of a written notice to Customer, whereupon both parties shall have no further liability to each other, subject to Customer's obligation to pay to Trane for all parts of the Services, equipment and material furnished to the date of termination, including any specially manufactured or non-stock items, whether in production or delivered.

(b) If any significant item of equipment is irreparably damaged by Customer, its employees, agents or invitees, or is destroyed or stolen, and if Customer fails to repair or replace said item within a reasonable period of time, Trane may terminate this Agreement by delivery of a written notice to Customer, whereupon both parties shall have no further liability to each other, subject to Customer's obligation to pay to Trane for all parts of the Services, equipment and material furnished to the date of termination, including any specially manufactured or non-stock items, whether in production or delivered. Any such termination shall not be considered any Event of Default on the part of either party.

Section 1.12. Changes to the Services. (a) Customer, by written Change Order, may request that Trane perform work in addition to the Services. Trane shall be obligated to perform such additional work only pursuant to a



Change Order agreed to and executed by Customer and Trane. The Change Order shall reflect the parties' agreement with respect to the scope of the additional work, the amount of any adjustment in the Contract Price, and the extent of any adjustment in the contract time.

(b) If a Change Order provides for an adjustment to the Contract Price, such adjustment shall be based on one of the following methods:

- (1) A lump sum agreed to by Customer and Trane;
- (2) Unit prices set forth in this Agreement or subsequently agreed to; or
- (3) Cost of the work ordered plus a fee agreed to by the parties.

(c) The following types of costs, which listing is not all-inclusive, shall be included in the determination of the cost of the additional work:

- (1) costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or industry practice or custom, and workers' compensation insurance;
- (2) costs of materials, supplies and equipment, including transportation thereof, whether the same is incorporated or consumed in the additional work;
- (3) the costs of renting machinery and equipment, except hand tools;
- (4) premium costs for all bonds and insurance, permit or other governmental approval or inspection fees, and sales, use or comparable taxes relating to the additional work; and
- (5) additional costs of supervision and field office personnel directly attributable to the additional work.

Section 1.13. Adjustment to Contract Time. Trane shall be allowed an equitable adjustment in the Contract Time for performance of additional Work that increases the amount of time required to perform the Services.

Section 1.14. Allocation to Trane of Tax Deduction under Section 179D of the Internal Revenue Code. For calendar tax year(s) in which (a) the provisions of Section 179D of the Internal Revenue Code are in effect and (b) the qualifying property installed as a part of the Services has been placed in service pursuant to Section 179D, Customer agrees to allocate the tax deduction available under Section 179D solely to Trane pursuant to Section 179D(d)(34) and, upon a written request from Trane, shall provide the written form of allocation to the Customer that is required by the Internal Revenue Service.

Section 1.15. Pre-Existing Conditions. Trane is not liable for any claims, damages, losses, or expenses, arising from or related to conditions that existed in, on, or upon the Work site before the Commencement Date of this Agreement ("Pre-Existing Conditions"), including, without limitation, damages, losses, or expenses involving Pre-Existing Conditions of the building envelope, mechanical system, plumbing, and/or indoor air quality issues involving mold and/or fungi. Trane also is not liable for any claims, damages, losses, or expenses, arising from or related to work done by or services provided by individuals or entities that are not employed by or hired by Trane.

ARTICLE 2 - CUSTOMER'S OBLIGATIONS

Section 2.01. Representations and Warranties of Customer. Customer hereby warrants and represents to Trane that:



(a) Customer is the legal fee owner of the Premises and/or otherwise has all requisite authority to make the improvements to the Premises that will result from Trane's performance of the Services;

(b) Customer has provided Trane with all records heretofore requested by Trane and the information set forth therein is, and all information in other records to be subsequently provided pursuant to this Agreement will be, true and accurate in all material respects except as may be disclosed to Trane by Customer in writing;

(c) Customer has disclosed in writing to Trane the existence and location of all known or suspected asbestos and other hazardous materials on the Premises; and

(d) Customer has no knowledge of any facts or circumstances that, but for the passage of time, would materially, adversely affect either party's ability to perform its respective obligations hereunder and, if Customer is a governmental entity or instrumentality thereof, Customer has complied with all laws and regulations relative to bidding or procurement.

Section 2.02. Customer Default. Each of the following events or conditions shall constitute a default by Customer and shall give Trane the right to, without an election of remedies: (a) proceed pursuant to Section 7.01; and/or (b) terminate this Agreement by delivery of written notice declaring termination, upon which event Customer shall be liable to Trane for all Services furnished to date, including any specially manufactured or non-stock items, whether in production or delivered, and any damages sustained by Trane, including lost profit.

(1) Any failure by Customer to pay or cause to be paid amounts due Trane more than thirty (30) days after the date of the invoice therefor;

(2) Any representation or warranty furnished by Customer in this Agreement is false or misleading in any material respect when made;

(3) Any default by Customer under any instrument or agreement related to the financing of all or any part of the Services or equipment hereunder;

(4) Any failure by Customer to perform or comply with any material term or condition of this Agreement, including breach of any covenant contained herein, provided that such failure continues for ten (10) days after written notice to Customer demanding that such failure be cured or, if cure cannot be effected in such ten (10) days, Customer fails to promptly begin to cure and diligently proceed to completion thereof; or

(5) The commencement of any voluntary or involuntary proceedings in bankruptcy or receivership by or against Customer, Customer shall become insolvent, make a general assignment for the benefit of creditors, or Customer shall fail to pay its debts as and when they become due.

ARTICLE 3 - INSURANCE

Section 3.01. Trane's Liability Insurance. Trane shall purchase from and maintain, without interruption from the commencement of the Services until the date of final payment, a Commercial General Liability policy, Worker's Compensation and Employer's Liability policy and Commercial Automobile Liability policy, through a company or companies rated A VIII or better by A.M. Best Company.

Section 3.02. Customer's Liability and Property Insurance. (a) Customer shall be responsible for purchasing and maintaining Commercial General Liability Insurance of the type and amount Customer deems necessary and appropriate.

(b) Customer shall purchase and maintain until Final Payment property insurance for the installation work in progress at least in an amount equal to the Contract Price, as the same may be adjusted from time to time, for the installation work (including the equipment) on a replacement cost basis with a deductible of no more than \$5,000



from an insurer reasonably acceptable to Trane. Such property insurance shall include the interests of Customer, Trane, and its subcontractors (at whatever tier) as additional insureds as their interests may appear. The property insurance purchased by Customer shall be on an all-risk policy form. The property insurance shall cover portions of the installation work stored off site after written approval of Customer at the value established in the approval. Customer, for itself and its insurance carriers, hereby waives all rights of subrogation against Trane and any of its subcontractors, agents, employees, and officers with respect to property insurance and any other insurance coverages maintained by Customer.

(c) A loss insured under Customer's property insurance shall be adjusted by Customer's Insurer as a fiduciary and made payable to Customer as a fiduciary for the insureds, as their respective interests may appear, subject to requirements of any applicable mortgagee clause. Trane shall pay its subcontractors their just shares of insurance proceeds received by Customer and remitted to Trane, and, by appropriate agreements, written where legally required for validity, shall require said subcontractors to make payments to their subcontractors in a similar manner. In its fiduciary role, Customer shall have the power to negotiate and settle a loss with insurers; provided, however, that at least ten (10) days prior to agreeing to the proposed settlement, Customer shall advise the parties in interest in writing of the terms of the same and the parties in interest shall have seven (7) days thereafter to object in writing to the proposed adjustment or settlement; if such objection is made, Customer shall not enter into or agree to the proposed adjustment or settlement and the parties shall proceed pursuant to Section 7.01.

Section 3.03. Customer's Loss of Use/Business Interruption Insurance. Customer may purchase and maintain insurance to protect against loss of use of Customer's property or business interruption due to fire or other commonly insured hazards, however such fire or hazards may be caused. Customer acknowledges that Trane is not required to purchase or maintain such insurance against the loss of use of Customer's property or business interruption. CUSTOMER HEREBY WAIVES ALL CLAIMS AND CAUSES OF ACTION IT MAY HAVE AGAINST TRANE AND ANY OF ITS SUBCONTRACTORS, AGENTS, EMPLOYEES, AND OFFICERS FOR LOSS OF USE OF CUSTOMER'S PROPERTY OR BUSINESS INTERRUPTION, WHETHER INSURED OR NOT, INCLUDING CONSEQUENTIAL, INCIDENTAL, SPECIAL, OR OTHER DAMAGES DUE TO SUCH HAZARDS, REGARDLESS OF CAUSE.

Section 3.04. Evidence of Insurance. Certificates of insurance acceptable to the Customer and to Trane shall be provided by each party to the other prior to commencement of performance of any Services. Such certificates shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least thirty (30) days prior written notice has been given to the other party. If any of the insurance coverages are required to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted with the final application for payment. Customer's certificate shall clearly name "Trane U.S. Inc." as an additional insured with an endorsement containing no restrictions or limitations on the policy that do not also apply to the named insured. Neither the procurement nor maintenance of any type of insurance by Customer shall in any way be construed or deemed to limit, waive, or release Customer from any of the obligations and risks of Customer under this Agreement, or to be a limitation on the nature and extent of such obligations and risks.

ARTICLE 4 - HAZARDOUS MATERIALS

Section 4.01. Asbestos and Hazardous Materials. (a) Trane's Services and other work in connection with this Agreement expressly exclude any work connected or associated with Hazardous Materials. Hazardous Material means any pollutant, contaminant, toxic or hazardous waste, dangerous substance, potentially dangerous substance, noxious substance, toxic substance, flammable, explosive, radioactive material, urea formaldehyde, foam insulation, asbestos, asbestos-containing materials ("ACM's"), polychlorinated biphenyl ("PCB"), mold, fungus, bacteria, microbial growth, or other contaminates or airborne biological agents, and any other substances, the removal of which is required, or the manufacture, preparation, production, generation, use, maintenance, treatment, storage, transfer, handling, or ownership of which is restricted, prohibited, regulated, or penalized by any and all federal, state, county, or municipal statutes or laws now or at any time hereafter in effect, including but not limited to, the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. §§ 9601 et



seq.), the Hazardous Materials Transportation Act (49 U.S.C. §§ 1801 et seq.), the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.), the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.), the Clean Air Act (42 U.S.C. §§ 7401 et seq.), the Toxic Substances Control Act, as amended (15 U.S.C. §§ 2601 et seq.), and the Occupational Safety and Health Act (29 U.S.C. §§ 651 et seq.), as the laws have been and may be amended and supplemented.

(b) Trane shall not be required to perform any identification, abatement, remediation, cleanup, control, or removal of Hazardous Materials. Customer warrants and represents that, except as expressly, and by reference to this Section, set forth in Exhibit B (Scope of Services) or Exhibit C (Description of Premises), there are no Hazardous Materials on the Premises that will in any way affect Trane’s Services and Customer has disclosed to Trane the existence and location of any Hazardous Materials in all areas within which Trane will be performing any part of the Services. The existence or location of any Hazardous Materials that have been so disclosed by Customer to Trane shall be the responsibility of Customer.

(c) Should Trane become aware of or suspect the presence of Hazardous Materials, Trane shall have the right to immediately stop work in the affected area and shall notify Customer. Customer will be responsible for taking any and all action necessary to correct the condition in accordance with all applicable laws and regulations. Trane shall be required to resume performance of the Services in the affected area only in the absence of Hazardous Materials or when the affected area has been rendered harmless; if the area has not been or cannot be rendered harmless within thirty (30) days of discovery of the Hazardous Material, Trane may terminate this Agreement and Customer shall be liable to Trane for the Services completed to date of termination and lost profits. Customer shall compensate Trane for any additional costs incurred by Trane as a result of work stoppage, including demobilization and remobilization. Under no circumstances shall Trane be obligated to transport or handle Hazardous Material, to provide any notices to any governmental authority or agency, or to inspect or examine the Premises for the presence of Hazardous Materials. In addition to any other indemnity obligation of Customer to Trane, Customer will indemnify, defend, and hold harmless Trane, its officers, directors, beneficiaries, shareholders, partners, agents, and employees (collectively referred to as “Trane” for purposes of this Article 4) from all fines, suits, procedures, claims and actions of every kind, and all costs associated therewith (including attorneys’ and consultants’ fees) arising out of or in any way connected with ore related to: (1) the presence or any leak, deposit, spill, discharge, or other release or disposal of Hazardous Materials in connection with the performance of this Agreement or the Maintenance Agreement, except to the extent such Hazardous Materials were brought onto the Premises by Trane; and/or (2) Customer’s failure to identify and disclose Hazardous Materials and to fully comply with all federal, state, and local statutes, laws ordinances, codes, rules and regulation now or at any time hereafter in effect regarding Hazardous Materials. Trane shall not have any liability (whether direct or indirect and regardless of cause) relating to or arising from mold, fungus, bacteria, microbial growth, or other contaminates or airborne biological agents.

ARTICLE 5 - INDEMNIFICATION AND LIMITATION OF LIABILITY

Section 5.01. Indemnification. To the maximum extent permitted by law, Trane and Customer shall indemnify and hold each other harmless from any and all actions, costs, expenses, damages and liabilities, including reasonable attorneys' fees, resulting from death or bodily injury or damage to tangible physical property of the other, to the extent arising out of or resulting from the negligence of their respective employees or other authorized agents in connection with the Premises. However, neither party shall indemnify the other against actions, costs, expenses, damages and liabilities to the extent attributable to the acts or omissions of the other party. If the parties are both at fault hereunder, then any obligation to indemnify shall be proportional to their relative fault. The duty to indemnify will continue in full force and effect, notwithstanding the expiration or early termination of this Agreement, with respect to any claims based on facts or conditions which occurred prior to expiration or termination.

Section 5.02. Limitation of Liability. **NOTWITHSTANDING ANY PROVISION TO THE CONTRARY, NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR ANY SPECIAL, INCIDENTAL, INDIRECT CONSEQUENTIAL, PUNITIVE, EXEMPLARY DAMAGE (INCLUDING WITHOUT LIMITATION REFRIGERATION LOSS, BUSINESS INTERRUPTION, LOST**



DATA, LOST REVENUE, LOST PROFITS) OR CONTAMINANTS LIABILITIES, EVEN IF A PARTY HAS BEEN ADVISED OF SUCH POSSIBLE DAMAGE OR IF SAME WERE REASONABLY FORESEEABLE AND REGARDLESS OF WHETHER SUCH LIABILITY ARISES FROM BREACH OF CONTRACT, NEGLIGENCE, TORT, WARRANTY, STRICT LIABILITY, PRODUCT LIABILITY, OR ANY OTHER THEORY In no event will Trane's liability in connection with the provision of products or service or otherwise under this Agreement exceed the entire amount paid to Trane by Customer under this Agreement.

Section 5.03. CONTAMINANTS LIABILITY

The transmission of COVID-19 may occur in a variety of ways and circumstances, many of the aspects of which are currently not known. HVAC systems, products, services and other offerings have not been tested for their effectiveness in reducing the spread of COVID-19, including through the air in closed environments. **IN NO EVENT WILL TRANE BE LIABLE UNDER THIS AGREEMENT OR OTHERWISE FOR ANY INDEMNIFICATION, ACTION OR CLAIM, WHETHER BASED ON WARRANTY, CONTRACT, TORT OR OTHERWISE, FOR ANY BODILY INJURY (INCLUDING DEATH) OR ANY OTHER LIABILITIES, DAMAGES OR COSTS RELATED TO CONTAMINANTS (INCLUDING THE SPREAD, TRANSMISSION, MITIGATION, ELIMINATION, OR CONTAMINATION THEREOF) (COLLECTIVELY, "CONTAMINANTS LIABILITIES") AND CUSTOMER HEREBY EXPRESSLY RELEASES TRANE FROM ANY SUCH CONTAMINANTS LIABILITIES.**

ARTICLE 6 - WARRANTY

Section 6.01. Workmanship and Equipment Warranty. Trane warrants that, for a period of one year from the date of Final Completion (the "Warranty Period"), Trane-manufactured equipment installed hereunder and the installation work (i) shall be free from defects in material, manufacture, and workmanship and (ii) shall have the capacities and ratings set forth in Trane's catalogs and bulletins. Trane obligations of equipment start-up, if any are stated in the Proposal, are coterminous with the Warranty period. For Trane-manufactured equipment not installed by Trane the Warranty Period is the lesser of 12 months from initial start-up or 18 months from the date of shipment. Equipment and/or parts that are not manufactured by Trane ("Third-Party Product(s)") are not warranted by Trane and have such warranties as may be extended by the respective manufacturer. If such defect in Trane-manufactured equipment or the installation work is discovered within the Warranty Period, Trane will correct the defect or furnish replacement equipment (or, at its option, parts therefor) and, if said Trane-manufactured equipment was installed pursuant hereto, labor associated with the replacement of parts or equipment not conforming to this warranty. No liability whatsoever shall attach to Trane until said equipment and Services have been paid for in full and then said liability shall be limited to Trane's cost to correct the defective equipment or work and/or the purchase price of the equipment shown to be defective. Trane's warranties expressly exclude any remedy for damage or defect caused by corrosion, erosion, or deterioration, abuse, modifications or repairs not performed by Trane, improper operation, or normal wear and tear under normal usage. Trane shall not be obligated to pay for the cost of lost refrigerant. CUSTOMER UNDERSTANDS THAT COMPANY IS NOT THE MANUFACTURER OF ANY THIRD-PARTY PRODUCT(S) AND ANY WARRANTIES, CLAIMS, STATEMENTS, REPRESENTATIONS, OR SPECIFICATIONS ARE THOSE OF THE THIRD-PARTY MANUFACTURER, NOT COMPANY AND CUSTOMER IS NOT RELYING ON ANY WARRANTIES, CLAIMS, STATEMENTS, REPRESENTATIONS, OR SPECIFICATIONS REGARDING THE THIRD-PARTY PRODUCT THAT MAY BE PROVIDED BY COMPANY OR ITS AFFILIATES, WHETHER ORAL OR WRITTEN.

THE WARRANTY AND LIABILITY SET FORTH IN THIS SECTION ARE IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES, WHETHER IN CONTRACT OR IN NEGLIGENCE, EXPRESS OR IMPLIED, IN LAW OR IN FACT, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL TRANE BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL (INCLUDING WITHOUT LIMITATION LOST PROFITS), OR PUNITIVE DAMAGES. NO REPRESENTATION OR WARRANTY OF ANY KIND, INCLUDING WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE, IS MADE REGARDING PREVENTING, ELIMINATING, REDUCING OR INHIBITING ANY MOLD, FUNGUS, BACTERIA, VIRUS, MICROBIAL GROWTH, OR ANY OTHER CONTAMINANTS (INCLUDING COVID-19 OR ANY SIMILAR VIRUS) (COLLECTIVELY, "CONTAMINANTS"), WHETHER INVOLVING OR IN CONNECTION WITH EQUIPMENT, ANY COMPONENT THEREOF, SERVICES OR OTHERWISE. IN NO EVENT SHALL TRANE HAVE ANY LIABILITY FOR THE



PREVENTION, ELIMINATION, REDUCTION OR INHIBITION OF THE GROWTH OR SPREAD OF SUCH CONTAMINANTS INVOLVING OR IN CONNECTION WITH ANY EQUIPMENT, THIRD-PARTY PRODUCT, OR ANY COMPONENT THEREOF, SERVICES OR OTHERWISE AND CUSTOMER HEREBY SPECIFICALLY ACKNOWLEDGES AND AGREES THERETO.

ARTICLE 7 - GENERAL PROVISIONS

Section 7.01. Notices and Changes of Address. All notices to be given by either party to the other shall be in writing and must be either delivered or mailed by registered or certified mail, return receipt requested, addressed as follows:

If to Trane:	Trane U.S. Inc. 3253 E. Imperial Hwy. Brea, CA 92821 Attention: Brad Donnelly	If to Customer:	Orange County Sanitation District 10844 Ellis Ave. Fountain Valley, CA 92708 Attention: Donald Herrera
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or such other addresses as either party may hereinafter designate by notice to the other. Notices are deemed delivered or given and become effective upon mailing if mailed as aforesaid and upon actual receipt if otherwise delivered. All notices or other communications under this Agreement shall be in writing and may be delivered in person, or may be sent by receipted courier, facsimile transmission, express mail, e-mail, or postage prepaid certified or registered mail, addressed to the party for whom it is intended, at the addresses set forth in this Agreement. Either party may change its address for notice by giving written notice to the other party of the change. Any notice or other communication shall be deemed given no later than the date actually received. Notice by courier, express mail, certified mail, or registered mail shall be deemed given on the date it is officially recorded as delivered by return receipt or equivalent and, in the absence of such record of delivery, it shall be rebuttably presumed to have been delivered on the third business day after it was deposited, first-class postage prepaid, in the mails. Notices sent by fax or e-mail shall require tangible confirmation of receipt from the person to whom addressed.

Section 7.02. Assignment. Customer may not assign, transfer, or convey this Agreement, or any part hereof, or its right, title or interest herein, without the written consent of Trane. Subject to the foregoing, this Agreement shall be binding upon and inure to the benefit of Customer’s successors and assigns.

Section 7.03. Applicable Law and Jurisdiction. This Agreement is made and shall be interpreted and enforced in accordance with the laws of the state in which the Services are to be performed. Customer hereby submits to the personal jurisdiction of the courts of the state and of the United States District Court in such state in which the Services are to be performed and to being sued in such jurisdiction.

Section 7.04. Term of Agreement. The term (“Term”) of this Agreement shall commence as of the date on the effective Notice to Proceed and shall end upon final completion of the Services, provided, however, that the warranty obligation set forth in Article 6 shall survive expiration of the Term.

Section 7.05. Complete Agreement. This Agreement and the Exhibits attached hereto, together with any documents expressly incorporated herein by reference, shall constitute the entire Agreement between both parties regarding the subject matter hereof. This Agreement may not be amended, modified or terminated except by a writing signed by the parties hereto.

Section 7.06. Further Documents. The parties shall timely execute and deliver all documents and perform all further acts that may be reasonably necessary to effectuate the provisions of this Agreement.

Section 7.07. Exhibits. The following Exhibits are attached hereto and incorporated herein by this reference:

- Exhibit A: Payment Schedule
- Exhibit B: Scope of Services
- Exhibit C: Description of Premises

Exhibit D.1: Certificate of Substantial Completion

Exhibit D.2: Certificate of Final Completion and Acceptance

Section 7.08. Force Majeure. Trane shall not be considered to be in default hereunder when a failure of performance is due to an Event of Force Majeure. An "Event of Force Majeure" shall mean any cause beyond the control of Trane. Without limiting the foregoing, "Event of Force Majeure" includes: acts of God; acts of the public enemy; flood, earthquake, tornado, storm, fire; civil disobedience, labor disputes, labor or material shortages, or sabotage; restraint by court order or public authority (whether valid or invalid), and action or non-action by or inability to obtain or keep in force the necessary governmental authorizations, permits, licenses, certificates or approvals if not caused by the fault of Trane. If Trane is rendered unable to fulfill any of its obligations under this Agreement by reason of an Event of Force Majeure, it shall give prompt written notice of such fact to Customer and Trane's obligations shall be suspended until removal of the Event of Force Majeure.

Section 7.09. Execution and Counterparts. This Agreement and any amendment may be executed by the parties individually or in any combination, in one or more counterparts, each of which shall be an original and all of which together shall constitute one and the same instrument. Execution and delivery of this Agreement and any amendment shall be legally valid and effective through: (i) executing and delivering the paper copy of the document; (ii) transmitting the executed paper copy of the document by electronic mail in portable document format (".pdf") or other electronically scanned format; or (iii) creating, generating, sending, receiving or storing by electronic means this Agreement and any amendment, the execution of which is accomplished through use of an electronic process associated with this Agreement, and executed or adopted by a party with the intent to execute this Agreement (i.e. electronic signature).

Section 7.10. Severability. If any term or conditions of this Agreement is invalid, illegal or incapable of being enforced by any rule of law, all other terms and conditions of this Agreement will nevertheless remain in full force and effect so long as the economic or legal substance of the transaction contemplated hereby is not affected in a manner adverse to any party hereto. Upon any such determination of invalidity, illegality or unenforceability, the parties hereto shall negotiate in good faith to modify this Agreement so as to affect the original intent of the parties as closely as possible in an acceptable manner, to the end that the transactions contemplated by this Agreement are consummated to the extent possible.

Section 7.11. Bonds. In no event shall the Performance and Payment bonds cover any energy savings guarantees. Additionally, the bonds shall not cover any warranties beyond one year from completion of the installation.

Section 7.12. U.S. Government Work. If the Work is in connection with a U.S. Government contract, Customer certifies that it has provided and will provide current, accurate, and complete information, representations and certifications to all government officials, including but not limited to the contracting officer and officials of the Small Business Administration, on all matters related to the prime contract, including but not limited to all aspects of its ownership, eligibility, and performance. Anything herein notwithstanding, Trane will have no obligations to Customer unless and until Customer provides Trane with a true, correct and complete executed copy of the prime contract. Upon request, Customer will provide copies to Trane of all requested written communications with any government official related to the prime contract prior to or concurrent with the execution thereof, including but not limited to any communications related to Customer's ownership, eligibility or performance of the prime contract. Customer will obtain written authorization and approval from Trane prior to providing any government official any information about Trane's performance of the work that is the subject of this offer or agreement, other than this written offer or agreement.

Section 7.13. California Department of Industrial Relations Registration and Record of Wages.

- 1.1 To the extent Contractor's employees and/or its subcontractors perform work related to this Contract for which Prevailing Wage Determinations have been issued by the California Department of Industrial Relations (DIR) as more specifically defined under Labor Code section 1720 et seq., prevailing wages are required to be paid for applicable work under this Contract. It is Contractor's responsibility to

interpret and implement any prevailing wage requirements and Contractor agrees to pay any penalty or civil damages resulting from a violation of the prevailing wage laws.

- 1.2 Contractor and its subcontractors shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4(a)(1), the work is subject to compliance monitoring and enforcement by the California Department of Industrial Relations (DIR).
- 1.3 Contractor and its subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776. Contractor and its subcontractors shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Pursuant to Labor Code section 1776, the Contractor and its subcontractors shall furnish a copy of all certified payroll records to OC San and/or the 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 Department of Industrial Relations. Pursuant to Labor Code section 1776(h), penalties for non-compliance with a request for payroll records may be deducted from progress payments.
 - 1.3.1 As a condition to receiving payments, Contractor agrees to present to OC San, along with any request for payment, all applicable and necessary certified payrolls and other required documents for the period covering such payment request. Pursuant to Title 8, California Code of Regulations section 16463, OC San shall withhold any portion of a payment, up to and including the entire payment amount, until certified payroll forms and any other required documents are properly submitted. In the event certified payroll forms do not comply with the requirements of Labor Code section 1776, OC San may continue to withhold sufficient funds to cover estimated wages and penalties under the Contract.
- 1.4 The Contractor and its subcontractors shall comply with Labor Code section 1774 and section 1775. Pursuant to Labor Code section 1775, the Contractor and any of its subcontractors shall forfeit to OC San a penalty of not more than two hundred dollars (\$200) for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the DIR for the work or craft in which the worker is employed for any work.
 - 1.4.1 In addition to the penalty and pursuant to Labor Code section 1775, the difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate shall be paid to each worker by the Contractor or its subcontractor.
- 1.5 Contractor and its subcontractors shall comply with Labor Code sections 1810 through 1815. Contractor and its subcontractors shall restrict working hours to eight (8) hours per day and forty (40) hours per week, except that work performed in excess of those limits shall be permitted upon compensation for all excess hours worked at not less than one and one-half (1.5) times the basic rate of pay, as provided in Labor Code section 1815. The Contractor shall forfeit, as a penalty to OC San, twenty-five dollars (\$25) per worker per calendar day during which such worker is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week in violation of Labor Code sections 1810 through 1815.
- 1.6 Contractor and its subcontractors shall comply with Labor Code sections 1777.5, 1777.6, and 1777.7 concerning the employment of apprentices by Contractor or any subcontractor.
- 1.7 Pursuant to Labor Code sections 1860 and 3700, the Contractor and its subcontractors will be required to secure the payment of compensation to employees. Pursuant to Labor Code section 1861, Contractor, by accepting this contract, certifies that:



Master Turnkey Agreement

"I am aware of the provisions of section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract."

Contractor shall ensure that all its contracts with its subcontractors provide the provision above.

IN WITNESS WHEREOF, the duly authorized representatives of the parties have each executed this Agreement, effective as of the date first above written.

Trane U.S. Inc.

By: _____
(Signature)

(Printed Name)

Title: _____

Date: _____

Orange County Sanitation District

By: _____
Chad P. Wanke, Chair, Board of Directors

Kelly A. Lore, Clerk of the Board

Ruth Zintzun, Finance & Procurement Manager

Date: _____

Trane's state contractor's license number: 1066318
Trane's DIR Registration Number: PW-LR-1000615693

EXHIBIT A
Payment Schedule / Schedule of Values

Customer will make payments per the schedule of values in the amounts set forth in the following schedule:

Description of Work	Scheduled Value
Power Building #7	
Mobilization Upon Execution of Agreement by Customer	\$39,885.00
Procurement of Equipment	\$81,538.00
Installation	\$125,162.00
Startup and Testing	\$9,318.00
Punchlist and Sign-off	\$1,658.00
Power Building #8	
Mobilization Upon Execution of Agreement by Customer	\$56,698.00
Procurement of Equipment	\$138,932.00
Installation	\$210,544.00
Startup and Testing	\$20,579.00
Punchlist and Sign-off	\$3,394.00
Total Project Billing	\$687,708.00

EXHIBIT B
Scope of Services

The Services are defined as the following:

Scope of Work – Power Building #7

The new equipment installed shall consist of the following:

- One (1) New Energy Labs 1500 CFM Air Handler
- One (1) New Trane 5 Ton Heat Pump Condensing Unit

Installation

- Receive, store, transport, and install the following Trane-provided equipment:
 - (1) Energy Labs 1500 CFM Air Handling Unit.
 - (1) Trane 5-ton heat pump condensing unit.
 - Includes epoxy coating of the units. Protocall coating package includes:
 - Coating the coils, Interior Cabinet and Exterior Cabinet with a high tier color protective coating. Includes base rails, condenser internals, accessible fin areas, return bends, manifolds, coil casings, refrigerant lines (in the new units), compressor, condenser base area, louvered panels and ambient exposed components. Also, a clear conformal coating to electric controls.
 - Bare Metal Primed and Interior and Exterior Cabinet Coated with Two Coats of Ameron PSX-700 Pearl Gray.
 - Replacement stainless steel screws on all access panels.
- Furnish all labor, material and equipment as required to isolate, drain, disconnect, demo, and properly dispose of (1) existing split system (salvage rights reserved).
- Provide crane and rigging for removal of existing units and installation of new units.
- Install new split system comprised of (1) new air handling unit 11DAHU600 and (1) new condenser 11DCCU601.
 - Anchor and support new units as required by manufacturers recommendations.
 - Ductwork point of connection for new air handler to be at the unit, or closest to the unit as possible. No new ductwork has been included beyond minor replacement when disconnecting the existing unit and connecting the new unit.
 - Condensing unit to be re-installed on existing pads/supports. No vibration isolation or new curbs / caps included.
 - Furnish and install new galvanized steel condensate piping with new piping to connect to new equipment and terminate at the existing scupper drain.
 - Furnish and install new refrigerant piping and associated appurtenances as required between condenser and air handler.
 - Furnish and install new pipe supports for all new piping.
 - Leak check and testing of refrigerant piping prior to Trane startup.
 - Furnish and install new insulation on refrigerant piping, with aluminum jacketing.
- Furnish all labor, material and equipment to isolate electrical and disconnect (1) existing split system units. Existing disconnects to be removed.
- Furnish and install new fused disconnects for 11DAHU600 and 11DCCU601. Stainless steel enclosures included. Anticipate being able to utilize existing conduit from panel to existing disconnects. No new conduit or wire included from electrical panel to unit disconnects.

- Disconnect/Reconnect control wiring between condensers and air handlers per manufacturers' recommendation.
- Energize, test, and confirm phasing of all new feeders prior to unit start-up.
- Existing circuit breakers and feeders to be re-used.
- Startup and verify operation of new systems.
- Pre and post airflow readings at the AHU discharge only.
- Upon project completion, provide for stamped mechanical, electrical, and plumbing as built drawings
- Provide a one-year parts and labor warranty on the full installation.

Power Building #7 Assumptions / Exclusions

- Temporary cooling or heating equipment not included.
- Additional engineering or studies requested not included above what Trane is providing for mechanical, electrical, and plumbing engineering and design.
- No structural design or engineering included.
- New roofing, roof patching, roof repair is excluded.
- We assume no upgrade to the existing condensate termination at scupper drains are required for code compliance.
- Structural upgrades and seismic upgrades to the buildings are excluded.
- Electrical service upgrades are excluded. Electrical design is based on nameplate data and single line documentation provided by the customer. It is assumed this information is accurate therefore no further verification of electrical capacity is required.
- All work dealing with fire life safety systems, fire sprinkler systems, and smoke evacuation systems is excluded.
- Air balancing downstream of the unit has been excluded.
- Construction fencing, temporary offices, security is excluded.
- Third Party review, testing, special inspection fees, deputy inspector fees, or third-party commissioning of new systems is not included.
- Breaker coordination studies are excluded.
- Asbestos or Hazardous Material Abatement excluded.
- Replacement or upgrade of any existing non-code compliant systems is excluded.
- ADA requirements excluded.
- Customer to coordinate all shutdowns and lifts with Trane's schedule.
- Building permit fees, Plan check fees, Assessments, Taxes applicable to the development of property, Utility connection fees and Usage fees, AQMD permitting and/or Fees, SCE fees and Excess cable charges are excluded.
- If project is submitted and reviewed for permit / plan check, any request for additional engineering above and beyond what Trane is including will at an additional cost.
- Builders Risk (including flood and seismic insurance and Deductible) is excluded.
- Any items not specifically listed as scope of work is not included.
- We assume there will be no other work going on that will affect the timing or sequence of our installation.
- Liquidated or Consequential Damages not included.
- Demurrage or Storage Charges not included.
- Trane to retain salvage rights of all removed equipment and materials, if applicable.
- Temporary power or Trane provided utilities are excluded. We assume use of customer electrical, gas, and water for construction.
- Equipment view screens are excluded.
- Architectural drawings and line of sight drawings are excluded.
- Painting and/or patching has been excluded.

- No new controls or low voltage devices (thermostats or zone level controls) are included. We will re-use existing

Scope of Work – Power Building #8

The new equipment installed shall consist of the following:

- One (1) New Trane 16,300 CFM Air Handler
- Two (2) New Trane 15 Ton Condensing Units

Installation

- Receive, store, transport, and install the following Trane-provided equipment:
 - (1) Trane 16,300 CFM Air Handling Unit.
 - (2) Trane 15-ton condensing units.
 - Includes epoxy coating of the units. Protocell coating package includes:
 - Coating the Condenser coil, Interior Cabinet and Exterior Cabinet with a high tier color protective coating. Includes base rails, condenser internals, accessible fin areas, return bends, manifolds, coil casings, refrigerant lines, compressor, condenser base area, louvered panels and ambient exposed components. Also, a clear conformal coating to electric controls.
 - Bare Metal Primed and Interior and Exterior Cabinet Coated with Two Coats of Ameron PSX-700 Pearl Gray.
 - Replacement stainless steel screws on all access panels.
- Furnish all labor, material and equipment as required to isolate, drain, disconnect, demo, and properly dispose of (1) existing air handler and (2) condenser units (salvage rights reserved).
- Provide crane and rigging for removal of existing units and installation of new units.
- Install new split system comprised of (1) new air handling unit 18BAHU031 and (2) new condensers 18BCND032 and 18BCND033.
 - Anchor and support new units, including adapter curbs, as required by manufacturers recommendation (no structural upgrades or roofing work are included)
 - Ductwork point of connection for new air handler to be at the unit, or closest to the unit as possible. No new ductwork has been included beyond minor replacement when disconnecting the existing unit and connecting the new unit.
 - Condensing units to be re-installed on existing pads/supports. No vibration isolation or new curbs / caps included. Due to the increased size in condenser footprint, Trane will do structural engineering to determine sufficient mounting details.
 - As the structural details are unknown at this time, Trane has included a \$10,000 roofing allowance for any potential roofing work for this condenser scope.
 - Furnish and install new galvanized steel condensate piping with new piping to connect to new equipment and terminate at the existing scupper drain.
 - Furnish and install new refrigerant piping and associated appurtenances as required between condensers and air handler.
 - Furnish and install new pipe supports for all new piping.
 - Leak check and testing of refrigerant piping prior to Trane startup.
 - Furnish and install new insulation on refrigerant piping, with aluminum jacketing.
- Furnish all labor, material and equipment to isolate electrical and disconnect (1) existing air handler and (2) condenser units. Existing disconnects to be removed.
- Furnish and install new fused disconnects for 18BAHU031, 18BCND032 and 18BCND033. Stainless steel enclosures included. Anticipate being able to utilize existing conduit from panel to existing disconnects. No new conduit included.
- Disconnect/Reconnect control wiring between condensers and air handlers per manufacturers' recommendation.

- Energize, test, and confirm phasing of all feeders prior to unit start-up.
- Existing circuit breakers and feeders to be re-used.
- Startup and verify operation of new systems.
- Pre and post airflow readings at the AHU discharge only.
- Upon project completion, provide for stamped mechanical, electrical, and plumbing as built drawing.
- Provide a one-year parts and labor warranty on the full installation.

Power Building #8 Assumptions / Exclusions

- Temporary cooling or heating equipment not included.
- Additional engineering or studies requested not included above what Trane is providing for mechanical, electrical, and plumbing engineering and design. Engineering prior to start of project is not included, as-built drawings only included as stated in above scope of work.
- No structural design or engineering included.
- New roofing, roof patching, roof repair is excluded.
- We assume no upgrade to the existing condensate termination at scupper drains are required for code compliance.
- Structural upgrades and seismic upgrades to the buildings are excluded.
- Electrical service upgrades are excluded. Electrical design is based on nameplate data and single line documentation provided by the customer. It is assumed this information is accurate therefore no further verification of electrical capacity is required.
- All work dealing with fire life safety systems, fire sprinkler systems, and smoke evacuation systems is excluded.
- Air balancing downstream of the unit has been excluded.
- Construction fencing, temporary offices, security is excluded.
- Third Party review, testing, special inspection fees, deputy inspector fees, or third-party commissioning of new systems is not included.
- Breaker coordination studies are excluded.
- Asbestos or Hazardous Material Abatement excluded.
- Replacement or upgrade of any existing non-code compliant systems is excluded.
- ADA requirements excluded.
- Customer to coordinate all shutdowns and lifts with Trane's schedule.
- Building permit fees, Plan check fees, Assessments, Taxes applicable to the development of property, Utility connection fees and Usage fees, AQMD permitting and/or Fees, SCE fees and Excess cable charges are excluded.
- If project is submitted and reviewed for permit / plan check, any request for additional engineering above and beyond what Trane is including will at an additional cost.
- Builders Risk (including flood and seismic insurance and Deductible) is excluded.
- Any items not specifically listed as scope of work is not included.
- We assume there will be no other work going on that will affect the timing or sequence of our installation.
- Liquidated or Consequential Damages not included.
- Demurrage or Storage Charges not included.
- Trane to retain salvage rights of all removed equipment and materials, if applicable.
- Temporary power or Trane provided utilities are excluded. We assume use of customer electrical, gas, and water for construction.
- Equipment view screens are excluded.
- Architectural drawings and line of sight drawings are excluded.
- Painting and/or patching has been excluded.
- No new controls or low voltage devices (thermostats or zone level controls) are included. We will re-use existing

Notes & Clarifications

1. Any service not listed is not included.
2. Work will be performed during normal Trane business hours unless explicitly stated.
3. Payment and Performance bond included.
4. Total price based on immediate release of equipment and construction scheduled when equipment received, within approximately one month based on customer preference and weather conditions. Any customer delays of timeline could result in cost increase.
5. **Omnia Contract number 3341**

Financial items not included

- Bid Bond
- Liquidated or Consequential Damages
- Demurrage or Storage Charges
- Participation in OCIP or CCIP Insurance Programs

EXHIBIT C
Description of Premises

The Premises are described as follows:

OC Sanitation District
Plant No. 1
10844 Ellis Ave
Fountain Valley, CA 92708

Power Building #7
Power Building #8

EXHIBIT D.1 Certificate of Substantial Completion
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Certificate of Substantial Completion

{Customer & project name}
Trane Project No.:
Date Certificate Submitted to Customer:

The Services performed pursuant to the Turnkey Agreement (“Agreement”), by and between Trane U.S. Inc. (“Trane”), and (“Customer”), dated as of , have been inspected by Customer, have been determined to be substantially complete and Customer accepts the same in accordance with the terms of the Agreement.

The Date of Substantial Completion is:

Punch list items are listed on the attached, together with the date such items are to be completed.

The Warranty Period, pursuant to Article 6 of the Agreement, commences as of the date of Substantial Completion or the earlier dates stated below with respect to the following corresponding equipment or work:

Services: Description of Equipment or Work	Warranty Commencement Date

Trane U.S. Inc.

By: _____
(Signature)

(Printed Name)

Title: _____

Date: _____

(Customer)

By: _____
(Signature)

(Printed Name)

Title: _____

Date: _____

EXHIBIT D.2
Certificate of Final Completion

Certificate of Final Completion and Acceptance

{Customer & project name}

Trane Project No.:

Date Certificate Submitted to Customer:

The Services performed pursuant to the Turnkey Agreement (the “Agreement”), by and between _____ (“Customer”) and Trane U.S. Inc., dated as of _____, has been inspected by the undersigned Customer and have been determined to be finally complete.

The Date of Final Completion and Acceptance is hereby established as the earlier of (i) the date Customer executes this Certificate, as noted below, or (ii) fourteen (14) calendar days after the date noted above as the date this Certificate is submitted to Customer.

Trane U.S. Inc.

By: _____
(Signature)

(Printed Name)

Title: _____

Date: _____

(Customer)
By: _____
(Signature)

(Printed Name)

Title: _____

Date: _____



OPERATIONS COMMITTEE

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

Agenda Report

File #: 2023-3183

Agenda Date: 4/3/2024

Agenda Item No: 4.

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

SUBJECT:

DIGESTER GAS COMPRESSOR DRYER REPLACEMENTS AT PLANT NO. 1 AND PLANT NO. 2, PROJECT NO. FE23-01

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION: 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%).

BACKGROUND

Digester gas at Orange County Sanitation District (OC San) is collected from digesters and is compressed before being used as fuel for cogeneration. The digestion process creates a moisture-rich gas and when it is compressed, the water vapor is condensed. This condensed liquid water can result in damage to the cogeneration equipment. Moisture can be removed from the digester gas by cooling through either a refrigerated dryer system or a chilled water dryer system.

Plant No. 1 has one chilled water gas dryer and one refrigerated gas dryer system that run in parallel, and Plant No. 2 has two refrigerated gas dryer systems that run in parallel.

RELEVANT STANDARDS

- Comply with California Public Contract Code Section 20103.8, award construction contract to lowest responsive, responsible bidder
- Commitment to safety & reducing risk in all operations
- Maintain a proactive asset management program

PROBLEM

The refrigerated dryer system at Plant No. 1 has failed and is currently not in operation. The refrigerated dryer systems at Plant No. 2 are facing age and obsolescence issues, making them difficult to support and maintain.

PROPOSED SOLUTION

Approve a Services Contract for Specification No. S-2023-1432BD Digester Gas Compressor Dryer Replacements at Plant No. 1 and Plant No. 2, Project No. FE23-01. This project will demolish three existing refrigerated gas dryer systems and install new in-kind dryer systems.

TIMING CONCERNS

Plant No. 1 is operating without a redundant system. Delaying the replacement makes it difficult to shut down the chilled water dryer system for maintenance. Plant No. 2 is operating two dryers that are obsolete and failing.

RAMIFICATIONS OF NOT TAKING ACTION

If the digester gas cannot be dried, the digester gas would need to be flared instead of used as fuel to protect the cogeneration equipment from damage.

PRIOR COMMITTEE/BOARD ACTIONS

N/A

ADDITIONAL INFORMATION

OC San advertised Project No. FE23-01 for bids on November 29, 2023, and three (3) sealed bids were received on February 5, 2024. A summary of the bid opening follows:

Engineer's Estimate	\$ 6,250,000
<u>Bidder</u>	<u>Amount of Bid</u>
Innovative Construction Solutions	\$ 5,942,500
Kiewit Infrastructure West Co.	\$ 6,432,500
Air & Lube Systems, Inc	\$ 6,671,557

The bids were evaluated in accordance with the OC San's policies and procedures. A notice was sent to all bidders on February 8, 2024 informing them of the intent of OC San staff to recommend approval of the Services Contract to Innovative Construction Solutions.

Staff recommends approving a Services Contract to the lowest responsive and responsible bidder, Innovative Construction Solutions, for a total amount not to exceed \$5,942,500.

CEQA

The project is exempt from CEQA, and a Notice of Exemption will be filed with the OC Clerk-Recorder and State Clearing House after OC San Board of Directors approval of the Services Contract.

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 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:

- Services Contract
- FE23-01 Supplemental Attachment

SA:tk

SERVICES CONTRACT
Digester Gas Compressor Dryer Replacements at Plant No. 1 and Plant No. 2 (FE23-01)
Specification No. S-2023-1432BD

This SERVICES CONTRACT (hereinafter referred to as “Contract”), is made and entered into as of the date fully executed below, by and between Orange County Sanitation District (hereinafter referred to as “OC San”) and Innovative Construction Solutions (hereinafter referred to as “Contractor”), and collectively referred to herein as the “Parties.”

RECITALS

WHEREAS, OC San desires to obtain the services of Contractor for the Digester Gas Compressor Dryer Replacements at Plant No. 1 and Plant No. 2 (“Services”) as described in Exhibit “A” attached hereto and incorporated herein by this reference; and

WHEREAS, Contractor is qualified to perform the Services by virtue of experience, training, education, and expertise; and

WHEREAS, OC San desires to engage Contractor to provide the Services; and

WHEREAS, OC San selected Contractor to provide the Services in accordance with OC San’s current Purchasing Ordinance; and

WHEREAS, on April 24, 2024, OC San’s Board of Directors, by minute order, authorized execution of this Contract.

NOW, THEREFORE, in consideration of the above recitals and the mutual promises and benefits specified below, the Parties agree as follows:

1. General.

1.1 This Contract and all exhibits hereto are made by OC San and the Contractor.

1.2 The following exhibits are incorporated by reference and made part of this Contract.

- Exhibit “A” – Scope of Work
- Exhibit “B” – Bid
- Exhibit “C” – Determined Insurance Requirement Form
- Exhibit “D” – Contractor Safety Standards
- Exhibit “E” – Human Resources Policies
- Exhibit “F” – General Conditions
- Exhibit “G” – Bonds

1.3 In the event of any conflict or inconsistency between the provisions of the Contract and any of the provisions of the exhibits hereto, the provisions in the document highest in precedence shall be controlling. The order of precedence of the applicable documents is set forth below:

- a. Addenda issued prior to the deadline for submitting the bids – the last addendum issued will have the highest precedence
- b. Services Contract

- c. Exhibit "A" – Scope of Work
 - d. Permits and other regulatory requirements
 - e. Exhibit "C" – Determined Insurance Requirement Form
 - f. Exhibit "F" – General Conditions
 - g. Exhibit "D" – Contractor Safety Standards
 - h. Notice Inviting Bids
 - i. Exhibit "B" – Bid
- 1.4 Except as expressly provided otherwise, OC San accepts no liability for any expenses, losses, or actions incurred or undertaken by Contractor as a result of work performed in anticipation of providing the Services to OC San.

Work Hours: All work shall be scheduled Monday through Friday, between the hours of 7:30 a.m. and 4:30 p.m.

- 1.5 Days: Shall mean calendar days, unless otherwise noted.
- 1.6 OC San holidays (non-working days) are as follows: New Year's Day, Martin Luther King, Jr. Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Day after Thanksgiving, Christmas Eve, and Christmas Day.
- 1.7 Work: Shall mean all work, labor, and materials necessary to provide the Services.
- 1.8 The provisions of this Contract may be amended or waived only by an amendment executed by authorized representatives of both Parties.
- 1.9 The various headings in this Contract are inserted for convenience only and shall not affect the meaning or interpretation of this Contract or any paragraph or provision hereof.

2. **Scope of Work.**

- 2.1 Contractor shall provide the Services identified in Exhibit "A" in accordance with generally accepted industry and professional standards.
- 2.2 Modifications to Scope of Work. OC San shall have the right to modify the Scope of Work at any time. All modifications must be made by an amendment signed by both Parties and consistent with Exhibit "F" - General Conditions (General Conditions), including the sections entitled REQUEST FOR CHANGE (CHANGES AT CONTRACTOR'S REQUEST) and OWNER INITIATED CHANGES.
- 2.3 Familiarity with Work. By executing this Contract, Contractor warrants that: (a) it has investigated the work to be performed; (b) it understands the facilities, difficulties, and restrictions of the work under this Contract; and (c) it has examined the site of the work and is aware of all conditions at the site. Should Contractor discover any latent or unknown condition materially differing from those inherent in the work or as represented by OC San, it shall immediately inform OC San of this and shall not proceed, except at Contractor's risk, until written instructions are received from OC San.
- 2.4 Performance. Time is of the essence in the performance of the provisions hereof.

3. Contract Term.

3.1 The Services shall be completed within four hundred thirty-four (434) calendar days from the effective date of the Notice to Proceed.

3.2 Extensions. The term of this Contract may be extended only by an amendment signed by both Parties and consistent with the General Conditions, including the section entitled EXTENSION OF TIME FOR DELAY.

4. Compensation.

4.1 As compensation for the Services provided under this Contract, OC San shall pay Contractor a total amount not to exceed Five Million Nine Hundred Forty-Two Thousand Five Hundred Dollars (\$5,942,500.00).

4.2 Contractor shall provide OC San with all required premiums and/or overtime work at no charge beyond the amount specified above.

5. Payments and Invoicing.

5.1 OC San shall pay itemized invoices for work completed in accordance with Exhibit "A" thirty (30) days from receipt of the invoice and after approval by OC San's Project Manager or designee. OC San shall be the determining party, in its sole discretion, as to whether the Services have been satisfactorily completed.

5.2 Contractor shall submit its invoices to OC San Accounts Payable by electronic mail to APStaff@OCSan.gov. In the subject line, include "INVOICE" and the Purchase Order Number.

5.3 The invoices shall be consistent with the General Conditions, including the section entitled PAYMENT FOR WORK.

6. California Department of Industrial Relations Registration and Record of Wages.

6.1 To the extent Contractor's employees and/or its subcontractors perform work related to this Contract for which Prevailing Wage Determinations have been issued by the California Department of Industrial Relations (DIR) as more specifically defined under Labor Code section 1720 et seq., prevailing wages are required to be paid for applicable work under this Contract. It is Contractor's responsibility to interpret and implement any prevailing wage requirements and Contractor agrees to pay any penalty or civil damages resulting from a violation of the prevailing wage laws.

6.2 Contractor and its subcontractors shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4(a)(1), the work is subject to compliance monitoring and enforcement by the California Department of Industrial Relations (DIR).

6.3 Pursuant to Labor Code section 1773.2, a copy of the prevailing rate of per diem wages is available upon request at OC San's principal office. The prevailing rate of per diem wages may also be found at the DIR website for prevailing wage determinations at <http://www.dir.ca.gov/DLSR/PWD>.

6.4 Contractor and its 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). Pursuant to Labor Code sections 1773.2 and 1771.4(a)(2), Contractor shall post a copy of the prevailing rate of per diem wages at the job site.

- 6.5 Contractor and its subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776. Contractor and its subcontractors shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Pursuant to Labor Code section 1776, the Contractor and its subcontractors shall furnish a copy of all certified payroll records to OC San and/or the 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 Department of Industrial Relations. Pursuant to Labor Code section 1776(h), penalties for non-compliance with a request for payroll records may be deducted from progress payments.
 - 6.5.1 As a condition to receiving payments, Contractor agrees to present to OC San, along with any request for payment, all applicable and necessary certified payrolls and other required documents for the period covering such payment request. Pursuant to Title 8, California Code of Regulations section 16463, OC San shall withhold any portion of a payment, up to and including the entire payment amount, until certified payroll forms and any other required documents are properly submitted. In the event certified payroll forms do not comply with the requirements of Labor Code section 1776, OC San may continue to withhold sufficient funds to cover estimated wages and penalties under the Contract.
- 6.6 The Contractor and its subcontractors shall comply with Labor Code section 1774 and section 1775. Pursuant to Labor Code section 1775, the Contractor and any of its subcontractors shall forfeit to OC San a penalty of not more than two hundred dollars (\$200) for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the DIR for the work or craft in which the worker is employed for any work.
 - 6.6.1 In addition to the penalty and pursuant to Labor Code section 1775, the difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate shall be paid to each worker by the Contractor or its subcontractor.
- 6.7 Contractor and its subcontractors shall comply with Labor Code sections 1810 through 1815. Contractor and its subcontractors shall restrict working hours to eight (8) hours per day and forty (40) hours per week, except that work performed in excess of those limits shall be permitted upon compensation for all excess hours worked at not less than one and one-half (1.5) times the basic rate of pay, as provided in Labor Code section 1815. The Contractor shall forfeit, as a penalty to OC San, twenty-five dollars (\$25) per worker per calendar day during which such worker is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week in violation of Labor Code sections 1810 through 1815.

- 6.8 Contractor and its subcontractors shall comply with Labor Code sections 1777.5, 1777.6, and 1777.7 concerning the employment of apprentices by Contractor or any subcontractor.
- 6.9 Contractor shall include, at a minimum, a copy of the following provisions in any contract it enters into with any subcontractor: Labor Code sections 1771, 1771.1, 1775, 1776, 1777.5, 1810, 1813, 1815, 1860, and 1861.
- 6.10 Pursuant to Labor Code sections 1860 and 3700, the Contractor and its subcontractors will be required to secure the payment of compensation to employees. Pursuant to Labor Code section 1861, Contractor, by accepting this contract, certifies that:

“I am aware of the provisions of section 3700 of the Labor Code which require every employer to be insured against liability for workers’ compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.”

Contractor shall ensure that all its contracts with its subcontractors provide the provision above.

- 6.11 Contractor shall comply with the provisions specified in the General Conditions section entitled LAWS TO BE OBSERVED.
7. **Damage to OC San’s Property.** Any of OC San’s property damaged by Contractor, any subcontractor, or by the personnel of either will be subject to repair or replacement by Contractor at no cost to OC San and consistent with the General Conditions, including the section entitled PRESERVATION OF PROPERTY.
8. **Freight (F.O.B. Destination).** Contractor assumes full responsibility for all transportation, transportation scheduling, packing, handling, insurance, and other services associated with delivery of all products deemed necessary under this Contract.
9. **Audit Rights.** Contractor agrees that, during the term of this Contract and for a period of three (3) years after its expiration or termination, OC San shall have access to and the right to examine any directly pertinent books, documents, and records of Contractor relating to the invoices submitted by Contractor pursuant to this Contract.
10. **Contractor Safety Standards and Human Resources Policies.** OC San requires Contractor and its subcontractor(s) to follow and ensure their employees follow all Federal, State, and local regulations as well as the Contractor Safety Standards while working at OC San locations. If, during the course of the Contract, it is discovered that the Contractor Safety Standards do not comply with Federal, State, or local regulations, the Contractor is required to follow the most stringent regulatory requirement at no additional cost to OC San. Contractor, its subcontractors, and all of their employees shall adhere to the safety requirements in Exhibit “A,” all applicable Contractor Safety Standards in Exhibit “D,” and the Human Resources Policies in Exhibit “E.”
11. **Insurance.** Contractor and all its subcontractors shall purchase and maintain, throughout the term of this Contract and any periods of warranty or extensions, insurance in amounts equal to the requirements set forth in the signed Exhibit “C” – Determined Insurance

Requirement Form. Contractor shall not commence work under this Contract until all required insurance is obtained in a form acceptable to OC San, nor shall Contractor allow any subcontractor to commence service pursuant to a subcontract until all insurance required of the subcontractor has been obtained. Failure to obtain and maintain the required insurance coverage shall result in termination of this Contract.

12. **Bonds.** Prior to entering into the Contract, Contractor shall furnish bonds (attached hereto in Exhibit "G"), consistent with the requirements specified in the General Conditions, and which shall be approved by OC San's General Counsel. The bonds shall be one in the amount of one hundred percent (100%) of the total Contract price bid, to guarantee the faithful performance of the work, and the other in the amount of one hundred percent (100%) of the total Contract price bid, to guarantee payment of all claims for labor and materials furnished. This Contract shall not become effective until such bonds are supplied to and accepted by OC San. Bonds must be issued by a California admitted surety and must be maintained throughout the life of the Contract and during the warranty period.

13. **Indemnification and Hold Harmless Provision.** Contractor shall assume all responsibility for damages to property and/or injuries to persons, including accidental death, which may arise out of or may be caused by Contractor's equipment and/or Services under this Contract, or by its subcontractor(s), or by anyone directly or indirectly employed by Contractor, and whether such damage or injury shall accrue or be discovered before or after the termination of the Contract. Except as to the sole active negligence of or willful misconduct of OC San, Contractor shall indemnify, protect, defend, and hold harmless OC San, its elected and appointed officials, officers, agents, and employees from and against any and all claims, liabilities, damages, or expenses of any nature, including attorneys' fees: (a) for injury to or death of any person, or damage to property, or interference with the use of property arising out of or in connection with Contractor's performance under the Contract, and/or (b) on account of use of any copyrighted or uncopyrighted material, composition, or process; or any patented or unpatented invention, article, or appliance furnished or used under the Contract, and/or (c) on account of any goods and services provided under this Contract. This indemnification provision shall apply to any acts or omissions, willful misconduct, or negligent misconduct, whether active or passive, on the part of Contractor or anyone employed by or working under Contractor. To the maximum extent permitted by law, Contractor's duty to defend shall apply whether or not such claims, allegations, lawsuits, or proceedings have merit or are meritless; or which involve claims or allegations that any of the parties to be defended were actively, passively, or concurrently negligent; or which otherwise assert that the parties to be defended are responsible, in whole or in part, for any loss, damage, or injury. Contractor agrees to provide this defense immediately upon written notice from OC San, and with well qualified, adequately insured, and experienced legal counsel acceptable to OC San. This section shall survive the expiration or early termination of the Contract.

14. **Independent Contractor.** The relationship between the Parties hereto is that of an independent contractor and nothing herein shall be deemed to make Contractor an OC San employee. During the performance of this Contract, Contractor and its officers, employees, and agents shall act in an independent capacity and shall not act as OC San's officers, employees, or agents. Contractor and its officers, employees, and agents shall obtain no rights to any benefits which accrue to OC San's employees.

15. **Subcontracting and Assignment.** Any subcontracting or assignment shall be governed by the provisions of the General Conditions including the sections entitled SUBCONTRACTING and ASSIGNMENT.
16. **Disclosure.** Contractor agrees not to disclose, to any third party, data or information generated from this Contract without the prior written consent from OC San.
17. **Non-Liability of OC San Officers and Employees.** No officer or employee of OC San shall be personally liable to Contractor, or any successor-in-interest, in the event of any default or breach by OC San, or for any amount which may become due to Contractor or to its successor, or for breach of any obligation under the terms of this Contract.
18. **Third-Party Rights.** Nothing in this Contract shall be construed to give any rights or benefits to anyone other than OC San and Contractor.
19. **Applicable Laws and Regulations.** Contractor shall comply with all applicable Federal, State, and local laws, rules, and regulations. Contractor also agrees to indemnify and hold OC San harmless from any and all damages and liabilities assessed against OC San as a result of Contractor's noncompliance therewith. Any provision required by law to be included herein shall be deemed included as a part of this Contract whether or not specifically included or referenced.
20. **Licenses, Permits, Ordinances, and Regulations.** Contractor represents and warrants to OC San that it has obtained all licenses, permits, qualifications, and approvals of whatever nature that are legally required to provide the Services. Any and all fees required by Federal, State, County, City, and/or municipal laws, codes, and/or tariffs that pertain to the work performed under this Contract will be paid by Contractor.
21. **Regulatory Requirements.** Contractor shall perform all work under this Contract consistent with the General Conditions, including the section entitled STORMWATER REQUIREMENTS, and in strict conformance with applicable Federal, State, and local regulatory requirements including, but not limited to, 40 CFR 122, 123, 124, 257, 258, 260, 261, and 503, Title 22, 23, and Water Codes Division 2.
22. **Environmental Compliance.** Contractor shall, at its own cost and expense, comply with all Federal, State, and local environmental laws, regulations, and policies which apply to the Contractor, its subcontractors, and the Services, including, but not limited to, all applicable Federal, State, and local air pollution control laws and regulations.
23. **South Coast Air Quality Management District's Requirements.** It is Contractor's responsibility to ensure that all equipment furnished and installed be in accordance with the latest rules and regulations of the South Coast Air Quality Management District (SCAQMD). All Contract work practices, which may have associated emissions such as sandblasting, open field spray painting, or demolition of asbestos containing components or structures shall comply with the appropriate rules and regulations of SCAQMD.
24. **Warranties.** Contractor shall provide the warranties required in the Scope of Work and in the General Conditions, including the section entitled WARRANTY (CONTRACTOR'S GUARANTEE).

25. **Dispute Resolution.** Any disputes between the Parties shall be resolved as specified in the General Conditions, including the section entitled DISPUTES.
26. **Liquidated Damages.** In the event the Contractor fails to achieve completion of the work within the term of this Contract or achievement of any designated Milestones, after due allowance for extensions of time made in accordance with the Contract, if any, OC San will sustain damage which would be extremely difficult and impracticable to ascertain. The Parties therefore agree that in each such event, Contractor will pay to OC San liquidated damages (Liquidated Damages) as specified in the General Conditions, including section entitled TIME OF COMPLETION AND LIQUIDATED DAMAGES, in the sum of One Hundred Dollars (\$100.00) per day, as Liquidated Damages, and not as a penalty, for each and every calendar day during which completion of the work, as required in Exhibit "A," is so delayed. Contractor agrees to pay such Liquidated Damages and further agrees that OC San may offset the amount of Liquidated Damages from any monies due or that may become due Contractor under this Contract. Contractor also agrees that to the extent the amount of Liquidated Damages exceeds any monies due to the Contractor under this Contract, Contractor shall pay all such amounts to OC San upon demand. If this provision is found for any reason to be void, invalid, or otherwise inoperative so as to disentitle OC San from claiming Liquidated Damages, OC San is entitled to claim against the Contractor damages at law for the Contractor's failure to complete the work during the term of this Contract.
27. **Remedies.** In addition to other remedies available in law or equity, if the Contractor fails to perform the Services or repudiates its obligations under this Contract, or if OC San rejects the goods or Services or revokes acceptance of the Services, OC San may (a) cancel the Contract; (b) recover whatever amount of the purchase price OC San has paid, and/or (c) "cover" by purchasing, or contracting to purchase, substitute equipment and services for those due from Contractor. In the event OC San elects to "cover" as described in (c), OC San shall be entitled to recover from Contractor as damages the difference between the cost of the substitute equipment and services and the Contract price, together with any incidental or consequential damages.
28. **Force Majeure.** Neither party shall be liable for delays caused by accident, flood, acts of God, fire, labor trouble, war, acts of government, or any other cause beyond its control, but the affected party shall use reasonable efforts to minimize the extent of the delay. Work affected by a force majeure condition may be rescheduled by mutual consent of the Parties.
29. **Termination.**
- 29.1 OC San reserves the right to terminate this Contract for its convenience, with or without cause, in whole or in part, at any time, by written notice from OC San. Upon receipt of a termination notice, Contractor shall immediately discontinue all work under this Contract (unless the notice directs otherwise). OC San shall thereafter, within thirty (30) days, pay Contractor for work performed (cost and fee) through the date of termination. Contractor expressly waives any claim to receive anticipated profits to be earned during the uncompleted portion of this Contract. Such notice of termination shall terminate this Contract and release OC San from any further fee, cost, or claim hereunder by Contractor other than for work performed through the date of termination.
- 29.2 OC San reserves the right to terminate this Contract immediately upon OC San's determination that Contractor is not complying with the Scope of Work requirements, if the level of service is inadequate, or for any other default of this Contract.

29.3 OC San may also immediately terminate this Contract for default, in whole or in part, by written notice to Contractor:

- if Contractor becomes insolvent or files a petition under the Bankruptcy Act; or
- if Contractor sells its business; or
- if Contractor breaches any of the terms of this Contract; or
- if the total amount of compensation exceeds the amount authorized under this Contract.

29.4 All OC San's property in the possession or control of Contractor shall be returned by Contractor to OC San on demand or at the expiration or early termination of this Contract, whichever occurs first.

30. **Attorney's Fees.** 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 Contract, the prevailing party shall be entitled to reasonable attorney's fees, costs, and necessary disbursements in addition to any other relief to which the prevailing party may be entitled and as specified in the General Conditions, including in the section entitled CLAIMS.
31. **Waiver.** The waiver by either party of any breach or violation of, or default under, any provision of this Contract shall not be deemed a continuing waiver by such party of any other provision or of any subsequent breach or violation of this Contract or default thereunder. Any breach by Contractor to which OC San does not object shall not operate as a waiver of OC San's rights to seek remedies available to it for any subsequent breach.
32. **Severability.** If any section, subsection, or provision of this Contract; or any agreement or instrument contemplated hereby; or the application of such section, subsection, or provision is held invalid, the remainder of this Contract or instrument in the application of such section, subsection, or provision to persons or circumstances other than those to which it is held invalid, shall not be affected thereby, unless the effect of such invalidity shall be to substantially frustrate the expectations of the Parties.
33. **Survival.** The provisions of this Contract dealing with payment, warranty, indemnity, and forum for enforcement shall survive expiration or early termination of this Contract.
34. **Governing Law.** This Contract shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in the County of Orange in the event any action is brought in connection with this Contract or the performance thereof.
35. **Notices.**
35.1 All notices under this Contract must be in writing. Written notice shall be delivered by personal service, by electronic telecommunication, or sent by registered or certified mail, postage prepaid, return receipt requested, or by any other overnight delivery service which delivers to the noticed destination and provides proof of delivery to the sender. Rejection or other refusal to accept or the inability to deliver because of changed address for which no notice was given as provided hereunder shall be deemed to be receipt of the notice, demand, or request sent. All notices shall be effective when first received at the following addresses:

OC San: Donald Herrera
Senior Buyer
Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
dherrera@ocsan.gov

Contractor: Hiram Emadi
President
Innovative Construction Solutions
575 Anton Boulevard, Suite 850
Costa Mesa, CA 92626
hemadi@icsinc.tv

35.2 Each party shall provide the other party written notice of any change in address as soon as practicable.

36. **Read and Understood.** By signing this Contract, Contractor represents that it has read and understood the terms and conditions of the Contract.
37. **Authority to Execute.** The persons executing this Contract on behalf of the Parties warrant that they are duly authorized to execute this Contract and that by executing this Contract, the Parties are formally bound.
38. **Entire Agreement.** This Contract constitutes the entire agreement of the Parties and supersedes all prior written or oral communications and all contemporaneous oral agreements, understandings, and negotiations between the Parties with respect to the subject matter hereof.

Intentionally left blank. Signatures follow on the next page.

IN WITNESS WHEREOF, intending to be legally bound, the Parties hereto have caused this Contract to be signed by their duly authorized representatives.

ORANGE COUNTY SANITATION DISTRICT

Dated: _____

By: _____
Chad P. Wanke
Chair, Board of Directors

Dated: _____

By: _____
Kelly A. Lore
Clerk of the Board

Dated: _____

By: _____
Ruth Zintzun
Finance & Procurement Manager

INNOVATIVE CONSTRUCTION SOLUTIONS

Dated: _____

By: _____

Print Name and Title of Officer

LL:IG

Exhibit “A”

SCOPE OF WORK

**EXHIBIT A
SCOPE OF WORK
DIGESTER GAS COMPRESSOR DRYER REPLACEMENTS AT PLANT NO. 1
AND PLANT NO. 2 (FE23-01)
SPECIFICATION NO. S-2023-1432BD**

EXECUTIVE SUMMARY/OVERVIEW

The Orange County Sanitation District (“OC San” or the “Sanitation District”) operates the third largest wastewater agency west of the Mississippi River. Since 1954, we have safely collected, treated, and disposed of and/or reclaimed the wastewater generated by 2.6 million people living and working in central and northwestern Orange County, California.

Each day we treat approximately 185 million gallons of wastewater, enough water to fill Anaheim stadium over two and a quarter times. About 80 percent of the wastewater comes from homes – sinks, toilets, showers, laundry, and dishwashers. The remaining come from businesses – retail stores, restaurants, manufacturers, hotels, offices, and other industries.

A professional staff of more than 600 employees manages the day-to-day activities of OC San. Our facilities include 396 miles of sewer pipes, located throughout the county, and two (2) treatment plants – one (1) in Fountain Valley, CA and the other in Huntington Beach, CA – where wastewater is treated in accordance with strict state and federal standards.

Our employees are on duty protecting health and the environment by ensuring the sewer system efficiently operates 24 hours a day, 7 days a week and 365 days a year. We are very proud of the job we do and take pride in providing our customers with quality service.

SCOPE OF WORK

1 Location of Work

The work covered under this Contract will take place at the Orange County Sanitation District’s:

Plant No. 1 Digester Gas Facilities– 10844 Ellis Avenue Fountain Valley, CA 92708

Plant No. 2 Digester Gas Facilities– 22212 Brookhurst Street, Huntington Beach, CA 92648

2 General

This Scope of Work (SOW) defines the requirements for the work at the Orange County Sanitation Districts Digester Gas Drying Systems, Plant No.1 and Plant No. 2, to replace and rehabilitate the legacy Digester Gas Drying Systems and related appurtenances. This work includes the removal and demolition of the three (3) Gas Drying Systems and installation of new in-kind replacement Gas Drying Systems including associated piping, valves, instruments, controls, appurtenances, and testing, commissioning, and training requirements as defined herein. The replacement work shall only occur on one system at a time to keep the respective digester gas drying system online.

The Contractor shall furnish all labor, equipment, materials, machinery, tools, supplies, insurance, bonds, permits, licenses, transportation, and other incidentals necessary to complete all tasks and items of work described within the attachments and other portions of the Contract Documents and Drawings and as more specifically described below.

The Contractor shall perform and/or submit the following tasks: product submittals, work plan incorporating all OC San comments, project schedule, demolition of the legacy compressor system, prepare drawings and fabricate the new gas dryer skids, repair / rehabilitate the equipment concrete foundation and anchor bolt system, install anchor bolts, install the new gas dryers on existing foundations as required, perform factory and field testing on the new gas dryer system and appurtenances, test and commission the complete system onsite, provide training of OC San staff on system operation and maintenance, and complete other tasks as specified.

3 Definitions

- a. API – American Petroleum Institute
- b. As Found – shall mean the state the item is provided to the Vendor.
- c. As Left – shall mean the state the item is provided by the Vendor.
- d. ASME – The American Society of Mechanical Engineers
- e. ASTM – The American Society for Testing and Materials
- f. BPVC – Boiler and Pressure Vessel Code
- g. Cen Gen – Central Generation
- h. CML – Condition Monitoring Location
- i. Contractor – The Contractor is the company performing the work detailed in this SOW, and may be separate and distinct from the Vendor or manufacturer of the equipment. The Contractor is responsible for coordination between the Vendor and Manufacturer as necessary, in order to satisfy the requirements detailed in this SOW.
- j. Days – Calendar days unless otherwise noted.
- k. Engineer – A professional engineer licensed in the State of California according to the Board for Professional Engineers, Land Surveyors, and Geologists.
- l. ETC – Etcetera
- m. Existing – Currently exists and or installed onsite. This term usually refers to the equipment needing to be removed and replaced with new.
- n. Fitness – refers to every aspect of the item that defines its physical, chemical, or electrical nature, size, makeup, etc.
- o. Fit up – pertaining to the interaction, fitness, clearance, proximity, etc. between faying surfaces, conjoining, mating, and/or related parts.
- p. FPT – Female National Pipe Thread
- q. Genset – Engine Generator Set
- r. GWP – Global Warming Potential
- s. HEX – Heat Exchanger
- t. Hydro – Hydrostatic Pressure Test
- u. in – inch (unit of measure)
- v. In service – A state of equipment being in operation.
- w. lb – Pound (unit of measure)
- x. LOTO – Lock-Out / Tag-Out (denoting applicable safety protocol)
- y. MAWP – Maximum Allowable Working Pressure
- z. MDT – Minimum Design Temperature
- aa. Manufacturer (MFR) – The manufacturer(s) manufactures the equipment being necessary to complete this SOW. The MFR may be separate and distinct from the Vendor or Contractor.
- bb. NB – National Board
- cc. NDE – Non-Destructive Examination
- dd. NEW – shall mean virgin materials only, unused, unrecycled, unopened, and

- unadulterated.
- ee. OC San –Orange County Sanitation District
- ff. OEM— Original Equipment Manufacturer
- gg. O&M – Operations and Maintenance
- hh. On Stream – a condition where the pressure vessel has not been prepared for an internal inspection, and the vessel is still in operation.
- ii. P&ID – Piping and Instrumentation Diagram
- jj. Plant No. 1 – The Wastewater Treatment Plant located at 10844 Ellis Ave, Fountain Valley, CA 92708
- kk. Plant No. 2 – The Wastewater Treatment Plant located at 22212 Brookhurst St, Huntington Beach, CA 92646
- ll. ppm – parts per million
- mm. PSIG – pound(s) per square inch gauge (typically denoting pressure)
- nn. Ra—Roughness Average (measured in units of microinches or 1×10^{-6} inch)
- oo. Safety Device – Pressure Safety/Relief Valve, etc.
- pp. Shutdown – When a piece of equipment is taken out of service.
- qq. SOW – Scope of Work
- rr. STBY – Standby
- ss. TBD – To be determined
- tt. Useful Life – The useful life of a component, assembly, etc. is defined as the limit by which said device would fail before its next regularly scheduled overhaul.
- uu. Vendor – The Vendor provides the equipment necessary to fulfill this SOW. The Vendor of the equipment being installed by this SOW may be separate and distinct from the manufacturer and Contractor.

4 Attachments

- A. **Appendix A-1 Work Site Plan-Plant No. 1**-shows the project locations in the Plant No. 1 Digester Gas Compressor Building.
- B. **Appendix A-2 Work Site Plan-Plant No. 2**-shows the project locations in the Plant No. 2 Digester Gas Compressor Building.
- C. **Appendix A-3 Legacy Project Equipment Service Manual-Plant No. 1**-documentation from the projects that installed the equipment being rehabilitated by this project.
- D. **Appendix A-4 Legacy Project Equipment Service Manual-Plant No. 2**-documentation from the projects that installed the equipment being rehabilitated by this project.
- E. **Appendix A-5 Legacy Project Engineering Drawings-Plant No. 1**-drawings from the projects that installed the equipment being rehabilitated by this project.
- F. **Appendix A-6 Legacy Project Engineering Drawings-Plant No. 2**-drawings from the projects that installed the equipment being rehabilitated by this project.
- G. **Appendix A-7 Project P&ID-Plant No. 1**- scope and limits of the project, including the necessary required changes.
- H. **Appendix A-8 Project P&ID-Plant No. 2**- scope and limits of the project, including the necessary required changes.
- I. **Appendix A-9 Equipment Layout-Plant No. 1**- show the layout and location of the project equipment and various appurtenances with tag numbers corresponding to the P&ID tag numbers.
- J. **Appendix A-10 Equipment Layout-Plant No. 2**- show the layout and location of the project equipment and various appurtenances with tag numbers corresponding to the P&ID tag numbers.
- K. **Appendix A-11 Gas Composition and Flow**- reference for sizing of the Gas Compression System

- L. **Appendix A-12 Electrical Diagram-Plant No. 1**-detail the electrical aspects of the systems at each of the plants.
- M. **Appendix A-13 Electrical Plan and Diagram-Plant No. 2**-detail the electrical aspects of the systems at each of the plants.

5 Overview of the Work

The work outlined herein entails the rehabilitation of the Existing Gas Compressor Refrigerated Gas Dryer Systems and related Appurtenances as noted. The work includes the major items listed below for convenience; however, the Contractor shall abide by all portions of the contract documents, attachments, details, and requirements detailed herein:

- A. Demolition and removal of one (1) existing Zurn refrigerated gas dryer chiller skid at Plant No. 1; and two (2) parallel existing Pneumatech refrigerated gas dryer chiller systems at Plant No. 2, while preserving the inlet and outlet piping connections, and electrical tie-in locations.
- B. Preparation of the process areas for subsequent reinstallation of the new equipment, such as: concrete foundations, anchors, grouting, piping connections within the system being installed, electrical & instrumentation connections, junction boxes, and other related areas or appurtenances as detailed in this SOW.
- C. Furnish new materials and labor; and install three (3) new refrigerated gas dryer chillers with integral control panels (3), one (1) at Plant No. 1 and two (2) at Plant No. 2, in accordance with the contract drawings and specifications. Control panels to conform to existing controls and instrumentation, as shown on the project P&ID's and/or legacy equipment drawings and documentation.
- D. Creation and submission of as-built gas dryer chiller P&ID drawings showing all system components such as instrumentation, valves, gauges, controls, heat exchangers, and drivers.

6 Project/Work Elements

6.1 Scope of Work

The Contractor shall provide all required work and support services, including any Demolition, Design, Procurement, Installation, Modification, and Commissioning required for the satisfactory execution of this scope of work. The Contractor shall include in these services the evaluation of the system functionality, while addressing such factors as gas quality and composition, electrical integrity, pressure range, operating conditions, vibration, chemical compatibility, environmental considerations, maintenance and reliability, longevity, tagging requirements, equipment foundations and anchoring, training, and commissioning.

The existing Gas Compressor Refrigerated Gas Dryer Systems include those items shown in this SOW. However, only the "clouded" items on **Appendix A-7 Project P&ID-Plant No. 1** and **Appendix A-8 Project P&ID-Plant No. 2** shall be demolished and replaced by the Contractor, retaining the "tie-in" portions at the clouded interfaces for beneficial reuse and reattachment accordingly. The Contractor may install additional valves or instrumentation to aid in the installation, tie-in, cutover of the Dryer Systems, as approved by the OC San ENGINEER. Those portions of

interconnect piping, electrical conduits, junction boxes that are demolished or that reside inside the “clouded” portions must be replaced in-kind according to this SOW.

The listed specifications shall represent the minimum required performance characteristics for each of the Dryer Skids. Determination as to the acceptability of any proposed equipment or system(s) will be reviewed and accepted during the submittal process by the OC San ENGINEER.

6.1.1 Refrigerated Gas Dryer Chillers

Provide new in-kind Refrigerated Gas Dryer Chiller Skid Systems in accordance with the Attachments, Design Requirements, and this SOW. Comply with reference standards and design codes. Provide all labor and materials and tasks to deliver a complete operating system. Provide all the same functions as the existing Dryer Systems at a minimum, or as approved by ENGINEER in writing. Equipment Datasheets shall be provided by the Vendor for all equipment prior to delivery, for acceptance by the ENGINEER. All supplied piping and appurtenances that have the propensity to condense water from the surrounding air on its external surfaces, shall be fully insulated and of adequate thickness to ensure maximum system performance.

6.1.2 Process Design Conditions

	<u>Plant No. 1</u>	<u>Plant No. 2</u>
a. System Quantity	1	2
b. Hazardous Area Classification	Class 1 Division 1	See Section 6.1.5
c. Ambient & Air Temperature		
Minimum	30F	30F
Maximum	100F	100F
a. Permissible Space		
Indoors	See Section 6.1.4.2	See Section 6.1.4.2
Outdoors	NA	See Section 6.1.4.2
d. Process Gas Composition (H2O Saturated)	65% Methane / 35% CO2 + H2O	65% Methane / 35% CO2 + H2O
e. Process Gas Flow (Min.)	5300 SCFM	3500 SCFM
f. Process Gas Temp	100 F	100 F
g. Process Gas Pressure (Dryer Inlet)		
Minimum	50 psig	50 psig
Maximum	80 psig	80 psig

6.1.3 Dryer Chiller Design Considerations

	<u>Plant No. 1</u>	<u>Plant No. 2</u>
a. System Configuration	1	Parallel-1 Duty/1 Stby
b. No. of Skids (Maximum)	1	4
c. Refrigerant	ANY < 300 GWP	ANY < 300 GWP
d. Process Gas Outlet Temperature	75 F Dry Bulb	75 F Dry Bulb
e. Process Gas Outlet Dewpoint	40 F (+/- 2)	40 F (+/- 2)
f. Gas System Design Pressure	200 psig	200 psig
g. Total Allowable Gas Pressure Drop Maximum (Inlet to Outlet)	5 psig	5 psig
h. Cooling Water Supply Temp. (Max.)	85 F	85 F

i. Condenser Location	Indoor	Outdoor
j. Condenser Type	Water-cooled	Air-cooled
k. Compressor Type	Semi-Hermetic	Semi-Hermetic
l. Compressor Capacity Control	Single (1) Step	Single (1) Step
m. Process Gas Wetted Parts	Stainless Steel	Stainless Steel
n. Digester Gas Heat Transfer Media Precooler/Reheater Process Heat Exchanger	N/A Refrigerant	Process Gas Glycol
o. Permissible Moisture/Oil Carryover	<10 ppm	<10 ppm
p. Electrical	See Section 6.1.5	See Section 6.1.5
q. Seismic Zone	IV	IV

6.1.4 Mechanical

6.1.4.1 Tie-in Connections

	Plant No. 1	Plant No. 2
a. Gas Connections Dryer Skid Inlet Dryer Skid Outlet	8 in. 150 lb. Flange 8 in. 150 lb. Flange	6 in. 150 lb. Flange 6 in. 150 lb. Flange
b. Water Connections Water Inlet Water Outlet	2 in. 150 lb. Flange 2 in. (FPT)	NA NA

6.1.4.2 Envelope and Foundation Size

	Plant No. 1	Plant No. 2
a. Permissible Envelope Size Indoors (L x W x H) Outdoors (L x W x H)	122" x 77" x 120" NA	168" x 133" x 126" 187" x 187" x 126"
b. Foundation Size Indoors (L x W x H) Outdoors (L x W x H)	122" x 77" x 4" NA	168" x 133" x 4" 187" x 187" x 4"

6.1.5 Electrical

	Plant No. 1	Plant No. 2
a. Main Driver (nominal)	30 HP	30 HP
b. Service Factor	1.15	1.15
c. Breaker Size	80A	100A / 100A
d. Voltage	480 V	480 V
e. Phase	3	3
f. Frequency	60 Hz	60 Hz
g. Site Classification Indoor Outdoor	Class 1 Div. 1, Group D NA	Class 1 Div. 1, Group D Unclassified
h. Enclosure Rating Indoor Outdoor	NEMA-7 NA	NEMA-7 NEMA-4X

6.1.6 Instrumentation & Control

The following instrumentation shall be included on each skid as shown on the P&ID's, at a minimum, or as approved by the OC San ENGINEER in writing:

- a. Gas Inlet Temperature Gauge & Indicator
- b. Gas Outlet Temperature Gauge & Indicator
- c. Refrigerant Low-Pressure Gauge
- d. Refrigerant High-Pressure Gauge
- e. Compressor Low Oil Pressure Gauge
- f. Power On Light
- g. Compressor Running Light
- h. Refrigeration System Pumpdown Switch
- i. Auto-drain Timer on-off switch
- j. Emergency Off Pushbutton
- k. High Dewpoint Light
- l. Alarm Silence Pushbutton
- m. Elapsed Time Meter
- n. Alarm Horn

6.1.7 Material Requirements

The Contractor shall supply all major equipment according to this SOW and the following requirements:

A. Pressure Vessels & Heat Exchangers

ASME Section 8 Div. 1 of the Boiler and Pressure Vessel Code shall be employed in the design of all heat exchangers and pressure vessels, unless specifically exempt from them by the code, including National Board Registration. The Contractor shall provide a digital copy of all ASME calculations and shall also include a unique U-1 Mfr. Datasheets for each applicable vessel to the OC San ENGINEER as a submittal.

All process gas pressure vessels, heat exchangers, and wetted parts shall be constructed of 304 stainless steel at a minimum and designed accordingly. All refrigeration system piping and appurtenances shall employ materials designed according to the conditions and the refrigerant media and conditions detailed herein.

B. Digester Gas Composition and Flow

The Vendor shall be responsible to provide all Dryer Chiller equipment and appurtenances adequately sized to accommodate the flow conditions as detailed herein. The Vendor shall also provide detailed equipment sizing reports and/or datasheets, including records of all engineering calculations and assumptions.

C. Piping

The Contractor shall provide new piping, control valves, shut-off valves, pipe supports, and insulation as required. Piping shall be as required to reconnect the dryer system (s) to the existing piping network and tie-in points. Piping and valving shall be replaced with the same size, type, function, and material of construction as the existing piping to match the P&ID. All metallic components and elements in direct contact with the process gas and/or condensate shall be 304 stainless steel material or better, unless otherwise specified.

Connections shall be flanged, welded, threaded, or as otherwise acceptable to the OC San ENGINEER. Pickling and passivation applies to factory or shop

welds. Custom flanges with elbows and short pipe links can be pre-made and field attached as necessary.

D. System Appurtenances

The Contractor shall replace all appurtenances, separators, heat exchangers, components, valves, control devices, and instrumentation as detailed in the project P&ID's.

6.1.8 Electrical and Instrumentation

The Contractor shall be responsible for disconnecting existing system and reconnecting all new electrical equipment, including power feed, control panels, control valves, and instrumentation; and to replace all conduits, flex conduits, and wiring as needed to accommodate new installation. Contractor shall install new power and control cables from existing Motor Control Center and control panels to the new systems as needed to avoid splicing of cables. Provide additional conduit, supports, and equipment / instrument stands as necessary for a finished installation in accordance with this SOW or as approved by the ENGINEER. Installations shall be confined to within the provided permitted equipment area restrictions. Provide all components required to reconnect new items to existing systems. Supply and replace in-kind all the required instrumentation including properly sized relief valves, control valves, temperature elements, pressure gauges, and flow instruments as identified in this SOW or as necessary to provide a complete operational system.

6.1.9 Equipment Foundation Survey, Anchor Bolt Assessment

The existing concrete equipment foundations shall be re-used, and equipment system designed to fit on them and within the bounds detailed herein. Based on recent limited visual inspection of the anchor bolts, there is varying degrees of corrosion, some anchor bolt nuts do not have a full grip on the bolt threads due to shimming plates, and the condition of the anchor bolts below the anchor nut is not visible, therefore the Contractor shall assess the condition of the anchor bolts after the equipment is removed and determine if they can be salvaged and reused. Assume for bidding purposes that all the anchor bolts shall be replaced. Submit anchor bolt calculations prepared by a Professional Engineer licensed in the State of California.

6.1.10 Equipment Cutover

The Contractor shall be responsible for completing the operational cutover of each of the new Gas Dryer Chiller Skids within seven (7) calendar day duration of disconnecting the legacy dryer that it will be replacing. No more than one (1) refrigerated dryer can be non-operational at any one time, combined at either plant. The Contractor shall be responsible for the proper staging and coordination of the system cutovers, as well as providing a system purge plan and schedule of planned activities for coordination purposes.

Purging of the Digester gas shall be done in a safe manner, and through charcoal canisters to eliminate the release of hydrocarbons directly to the atmosphere. Purging of the refrigerants shall also be done in a similar manner. Proper disposal of all liquids and heat transfer fluids shall also be required.

6.1.11 LOTO

The Contractor shall assist as needed to properly isolate and render the system safe, while utilizing the lock and key method that is normally performed. OC San LOTO procedures shall be followed at all times.

6.1.12 Labor

All work shall be performed, and all components and materials shall be provided by the Contractor in accordance with this SOW. Provide all labor, elements, accessories, and appurtenances for a complete and fully operating system per the P&ID.

6.1.13 Essential facility

The new Dryer Chiller systems shall be designed as Essential Facilities with a Seismic Category of IV. The work shall be completed in accordance with the latest applicable codes and regulations.

6.1.14 Certificate of proper installation

Installation shall be in accordance with the applicable component or equipment manufacturer's requirements. The Dryer Chiller manufacturer shall provide Certification of Proper Installation prior to operation and Certification of Proper Operation prior to substantial completion.

6.1.15 Disposal

The Contractor shall be responsible for the removal of all debris and demolished items from the site(s) associated with this SOW. However, OC San reserves the right to keep all used, unused, and replaced parts. No materials or equipment shall be taken off the site, without OC San's written authorization.

6.1.16 Laydown area

OC San will provide limited space at Plant No. 1 and Plant No. 2 for a laydown and staging area as necessary, on premises to be determined. The Contractor shall include all expenses and costs related to accessing the laydown and staging area provided by OC San or for an offsite storage and laydown area if required.

6.1.17 Inspectors

OC San may assign inspectors and other staff to witness the Contractor's activities, including, but not limited to, installation, all readings taken, and all tests performed by the Contractor. The presence or lack of presence of OC San or OC San's representative does not relieve the Contractor from the requirements to perform all testing, all quality control and quality assurance, and other tasks required for the work. Submit test equipment and calibration certifications prior to taking readings and tests for OC San approval.

6.1.18 Hazardous substances

OC San has sampled various miscellaneous components in the surrounding area of the existing Dryer Chiller System, including paint on the plant air pipe, air compressor, air flasks, and has not detected any surface lead. If the

Contractor encounters any suspected hazardous waste or substances in the course of the Work, they shall notify OC San immediately.

6.1.19 Protection

The Contractor shall be solely responsible for protecting in place the equipment and area surrounding the existing Dryer Chiller systems, appurtenances, and associated components and to prevent damage to it. The Gas Compressor facilities shall be maintained in operation during the execution of the work. The Contractor shall coordinate the work to avoid any interference with normal operations of plant equipment and processes. Always maintain access to the system for OC San Operations and Maintenance staff.

6.1.20 Downtime

Downtime for power interruptions and other utility services requiring taps or connections shall be kept to a minimum. Interruptions are limited to a maximum of three (3) hours each occurrence, and occurrences shall be limited to one (1) per 24-hour period. Any work that blocks roadways, access to buildings or equipment, and parking lots shall require written acceptance from OC San prior to the work being done.

6.1.21 Shutdown requests

Written Shutdown requests shall be submitted to the OC San ENGINEER or other designated OC San staff. Requests shall include a detailed shutdown plan and drawings identifying the system or equipment included in the shutdown request. The Engineer's written acceptance of shutdown requests shall be obtained twenty-one (21) calendar days in advance. The Contractor shall follow OC San's LOTO procedures for requesting LOTO isolation of equipment and working under LOTO conditions. OC San will provide tags and the Contractor shall provide a lockout device for each worker. If Work on energized electrical systems is required, refer to the OC San Contractor Safety Standards April 21, 2022 (Revision 10) for additional pertinent safety requirements.

6.1.22 Testing and Commissioning

A. Factory Testing

The Contractor shall conduct factory testing to comply with applicable standards and required certifications prior to shipping of the compressors systems, or as acceptable to the ENGINEER. Submit results of the factory testing and required certification(s), if applicable, for approval prior to shipping to jobsite.

B. System Pressure Testing

The Contractor shall isolate and test all air piping, valves, nipples, instruments, gauges, connections, etc. according to industry recognized best practices, and as acceptable to the OC San ENGINEER.

C. Electrical and Instrumentation Testing

All new instruments shall be tested, and calibrated, prior to install in accordance with latest applicable International Society of Automation (ISA)

specifications and Scope of Work Appendices. Equipment tested may include some existing items to ensure a complete system test is accomplished. All new instruments, actuators, pressure gauges and/or transmitters shall be loop checked and commissioned to provide complete working system. The Contractor to perform loop checks of all above systems and OC San to witness the checks.

D. Commissioning

The following tests shall be required and/or complied with:

i. Operational Readiness Test [ORT]

Develop step-by-step procedures to systematically test every control circuit for all equipment, instruments, devices, and wiring installed or modified under this Contract where OC San has not provided a procedure. A procedure shall be submitted for each piece of equipment with a control schematic or I/O circuit. The procedure shall test equipment in LOCAL, HAND, and REMOTE MANUAL modes of operation. The Contractor shall match the format of the procedures provided by OC San, which includes a description of the action to be performed and anticipated result, the register number for the associated programmable logic controller input and output point to be verified, action to be verified with comments, and signatures for the Contractor and the OC San ENGINEER for each procedure step. Procedures shall use the appropriate testing method for instruments and devices, to verify that the circuit is operating properly and connected to the correct device.

ii. Functional Acceptance Test [FAT]

Develop step-by-step procedures to systematically test the functionality of all equipment and systems installed or modified under this contract where OC San has not provided a procedure. The procedure shall test equipment in local auto and remote automatic modes of operation. The procedure shall test all equipment and systems in remote automatic and auto modes to verify that the equipment and systems operate as described in the control strategies of the specifications or equipment specifications sections. The procedures shall describe the initiation of shutdowns and the expected results that are to be verified and shall test all startup and shutdown conditions for each piece of equipment and the system or process train to test the complete program functionality. The procedure shall include all testing scenarios. A procedure shall be submitted for each equipment and system. A system FAT shall be provided for all equipment that function together with programming interlocks. The Contractor shall match the format of the procedures provided by OC San.

iii. Reliability Acceptance Test [RAT]

During the RAT procedures, the equipment and systems will be operated under various scenarios of normal operating conditions. Failures will be simulated to test the fail-over logic, equipment

shutdown sequencing, and equipment startup sequencing. A test to check that the system can operate continuously in the intended manner for an extended period without failure. During the RAT, the system under test shall be operated within design parameters reflecting the day-to-day operation of the facilities for an uninterrupted period. The RAT shall not be performed until: (1) All FAT procedures and requirements for the commissioning package are complete; (2) All FAT punch list items have been signed off by the OC San ENGINEER; and (3) Commissioning Phase 2 OR-FAT Completion Letter has been accepted by the OC San ENGINEER.

E. Training

The Contractor shall provide a total of eight (8) hours of training maximum in accordance with the table shown below. Training shall be for the new Dryer Chiller Systems and associated equipment, valves, and instruments. Training shall cover the following, at a minimum:

1. Equipment location and operational overview, including purpose and plant function of equipment.
2. Review catalog cut sheets, parts list, drawings, and all components of approved submittals and operation manuals. Show how to use spare parts, if any, and how to order parts.
3. Installation of specific equipment, identifying piping and flow options, valves and their purpose, and instrumentation including location of primary element and location of instrument readout.
4. Review safety references and discuss proper precautions and safety procedures around equipment and process facilities, including applicable fire safety and fire codes.
5. All modes of operation and procedures for startup, shutdown, leak test, normal operation, and emergency operating procedures including discussion of system integration and electrical interlocks, if any.
6. Demonstrate the unit and perform standard operating procedures, rounds checks, startup and shutdown procedures including isolation for maintenance work and/or long-term non-use.
7. Operations troubleshooting procedures.
8. Preventative maintenance.
9. Corrective maintenance.
10. Review Equipment Service Manuals (ESM)
11. Answer questions

Submit proposed training schedule and lesson plans, including trainer qualifications, to OC San two (2) months prior to training. At least one week prior to training session submit training manuals, handouts, visual aids, and reference material to OC San. OC San will not schedule or allow training until all items are reviewed and accepted by OC San. One (1) week following training session provide one complete set of lesson plans, training manuals, handouts, visual aids, and reference material. All documents shall be submitted in electronic format acceptable to OC San.

Training schedule shall be in accordance with the following table, or as otherwise required:

Session	Audience	Attendance	Duration (hours)	Day and Time
1	Operations	6	2	Mon-Tue Days
2	Operations	6	2	Wed-Thurs Days
3	Maintenance	4	2	Mon-Tue Days
4	Maintenance	4	2	Wed-Thurs Days
		Total: 20	Total hrs: 8	

7 Contractor Responsibility

7.1 General

As part of the Contract and Scope of Work, the Contractor shall perform the following tasks and provide OC San with the following items:

- A. The Contractor shall complete the Scope of Work as described and provide supply all parts, tools and equipment required to complete the Scope of Work.
- B. The Contractor is responsible to provide all materials and/or equipment, and other work to provide a complete operating system, and as specified herein.
- C. All components, parts or equipment found defective during testing and commissioning shall be replaced or repaired by the Contractor.
- D. The Contractor shall review and comply with all applicable requirements of OC San Contractor Safety Standards April 21, 2022 (Revision 10).
- E. The Contractor is responsible to provide all consumable supplies needed for testing and commissioning, including transportation, testing, safety equipment and personnel protection equipment.
- F. The Contractor shall be solely responsible for installing and maintaining all items in accordance with the manufacturer instructions until OC San accepts the work as defined by this contract.
- G. The Contractor shall be responsible for the repair or replacement in kind of any item damaged by the Contractor or Contractor's sub-contractor without any cost or schedule impact to OC San until turnover of the Work to OC San at the time of Final Completion. Repairs shall be completed prior to Final Completion.
- H. The Contractor shall be responsible to provide all packaging and shipping for transportation of parts and materials and equipment to and from the job site to ensure products and materials arrive at the site undamaged.

- I. The Contractor shall take measurements and record all test data during testing and commissioning and shall provide these measurements and data in a report to OC San.

7.2 Equipment Removal

The Contractor shall be responsible for the complete removal and offsite disposal of the legacy Refrigerated Dryer Systems, Piping, and Heat Exchangers and other appurtenances as required to fulfill the contract requirements.

7.3 Equipment Installation

The Contractor shall be responsible for installing the project elements per the Project Specification, Attachments, and as detailed herein. The SOW outlines the minimum equipment requirements, and coupled with the project specifications, will dictate the final installation requirements. All project elements shall be installed per the manufacturer's guidelines, and/or legacy design intent. OC San reserves the right to change, revise, or adapt the installation requirements as deemed appropriate. During the execution of work, proper controls shall be in place to protect workers from injury, and damage to OC San Facilities.

7.4 Compressor Setting and Installation

The Contractor shall install the refrigerated dryers on their original concrete foundations and anchor them to the foundation per manufacturers specifications. The Contractor shall install all piping and connections to the existing piping, and install new valves, instruments, wiring, and appurtenances as required.

7.5 Permits/Licenses

- Professional Engineer licensed design oversight for Anchor Bolts as detailed herein.
- Contractor's License Class "A"

7.6 Project Management and Planning

The Contractor shall manage the project execution according to the following:

A. Project Communications

A minimum of two (2) weeks prior to the start of work, a meeting with OC San staff, Project Kick-off Meeting, shall be held to establish appropriate contacts and review the Contractor's plan to implement this work.

Contract conferences shall be held on an on-call basis with OC San staff to keep OC San apprised of the job, review work in progress, and receive comments. Conferences shall be held at the OC San's offices or virtually (i.e. Microsoft Teams) as operational needs dictate. All notes and decision items shall be captured by the Contractor and reported in electronic format within one week. The formal agenda shall also be submitted at least one week prior to each meeting. At a minimum, progress meetings will be Biweekly through-out the duration of the project.

B. Progress Meetings

The Contractor shall conduct recurring progress meetings. Attendees shall include the Contractor, OC San, OC San designated representative, if any, and manufacturers, vendors, and sub-contractors as needed for the meeting agenda.

Progress meetings shall occur biweekly and have a minimum duration of 30 minutes.

C. Design Services

The Contractor shall design the new Dryer Chiller Systems to fit on the existing foundations, and include the proper design of equipment anchorage, pipe routing, pipe connections, valving, electrical, instrumentation, and all other appurtenances to provide a complete, operational, reliable, and safe overall system solution.

The final design must bear the stamp of a professional engineer licensed in the State of California and include the anchor bolt calculations which follow the best practice recommendations for the type of system, speed, weight, vibrational characteristics, grout type, attachment techniques, etc., as well as all manufacturers' specifications and recommendations.

D. Field Survey and Verification

Before submitting fabrication and shop drawings, the Contractor shall perform a field survey to determine dimensions, materials of construction, joint types, fitting types, interconnections, electrical and instrumentation components, and to take other measurements necessary to accurately design, fabricate and install the equipment. Such survey and verification shall include, but not be limited to anchor bolts, foundations, and points of connection to existing piping, electrical systems, and instrumentation systems. Field verification shall include review of existing field electrical control panels where sensors and control signals are wired, types of electrical signals, and engineering units and range on each shall be field verified by the Contractor.

7.7 Safety Related Tasks

Follow all applicable requirements of the OC San Contractor Safety Standards April 21, 2022 (Revision 10) and CAL OSHA requirements. All workers shall have four (4)-gas air quality monitors on their person while at the site. The Contractor shall provide Injury and Illness Prevention Plan, Site-Specific Safety Plan, and Hot Work Permits for OC San review and approval. If confined space entry is necessary, submit permit required confined space entry documents.

7.8 Rigging, Disassembly, Removal, and Installation

The Contractor shall provide all equipment required for rigging, disassembly, removal of existing compressors, equipment, appurtenances, and the installation of new. Follow requirements of OC San Contractor Safety Standards April 21, 2022 (Revision 10) and SOP-303 Crane Safety Program.

The Contractor shall provide trained staff, all materials, and equipment necessary to remove the existing compressors, equipment, appurtenances and the installation of new.

7.9 Transportation

The Contractor assumes full responsibility and costs for all shipping, transportation, , fees, duties and tariffs, scheduling, packing, handling, insurance, and other services associated with delivery of all equipment and goods deemed necessary under this project.

The Contractor shall be liable for any damage that occurs during any transport of the equipment.

Follow all State and Local laws regarding transportation of any demolished equipment.

7.10 Quality Assurance and Quality Control

The Contractor and its personnel assigned to this Contract shall have adequate direct experience for this work, with direct experience in compressor system design, fabrication, and installation. Any personnel substitutions after award shall only be done with advanced written approval from OC San. Contractor shall provide resumes of proposed replacement staff for OC San review and approval.

The Contractor shall perform all work in accordance with approved written Quality Control Plan. The Contractor shall submit their Quality Control Plan to OC San for approval before the work begins. The Quality Control Plan shall include a description of the Contractor's procedures for calibrating test equipment, establishing work procedures, maintaining compliance to work procedures, monitoring quality of work, and training of staff. The Contractor's procedures for taking and recording data, organization and retention of records, and transmittal to OC San for review and acceptance shall be included. Include all relevant ISO 9001 procedures and certifications with the Quality Control Plan.

8 Project Schedule

- 8.1** The Contractor shall provide a Project Schedule within 14 days of the Notice to Proceed (NTP) and biweekly updated schedule during field work providing a 3-week look ahead. Schedule shall be a Gantt Chart or better. The purpose of the schedule shall be to ensure adequate planning and timely execution of the work by the Contractor, facilitate coordination and interfacing of the Contractor's work with others as needed, and establish a schedule to which subsequent periodic schedule updates will be compared to determine overall progress and performance toward satisfactory completion of the work.
- 8.2** The work activities comprising the schedule shall be of sufficient detail to assure adequate planning and execution of the work such that, in the judgment of OC San, it provides an appropriate basis for predicting, monitoring, evaluating, and recording the progress of the work. The schedule shall be detailed and show critical path activities, activity duration, predecessors and successors, and start and finish dates.
- 8.3** The schedule shall contain the following milestones: Notice to Proceed; mobilization; demolition; design; parts procurement; fabrication; construction start; testing and commissioning, specified contract milestones as applicable; substantial completion; and final completion.
- 8.4** In addition to milestones/timeline, the schedule shall show at a minimum the following tasks: field verification, submittal preparation and review, factory test, fabrication, material and equipment deliveries, installation, all connections to existing plant systems and equipment including interruptions, shutdowns, LOTO, and training.

8.5 The Contractor shall complete the project within 434 calendar days (62 weeks) from the date the Notice to Proceed is issued. A sample Project Schedule is provided below for reference purposes.

A. Recommended Project Schedule

Milestones/Timeline	Deadline (Weeks from Kick-Off/NTP)	Review Period (Weeks)	Cumulative Weeks
Kick-Off Meeting (NTP)	-	-	-
Submittal of Schedule	2	2	4
Submittals Shop Drawings	8	4	12
Parts Procurement	22	20	42
Submittals Construction Schedule	12	2	14
Fabrication Shop Drawings	14	4	18
Quality Control Plan	18	2	20
Installation, Operation, & Maintenance Manual	20	2	22
Training Schedule	22	2	24
Commissioning Plan	24	2	26
Installation	42	16	58
Training	58	-	58
Commissioning	60	2	62
Final Completion of Work	62	-	-

9 Payment Schedule

The payment shall be invoiced per the following work below:

- Mobilization to Site
- Upon delivery of all machine shop components
- Major mechanical completion
- Final start-up commissioning

10 Resources Available

10.1 Laydown and Staging Area (To Be Determined Upon Issuance of NTP)

11 Submittals and Deliverables

11.1 Submittals

The Contractor shall provide fabrication shop drawings, product data sheets, and other submittals and procedures for review and approval by OC San for all components and parts prior to fabrication or procurement. The Contractor shall group submittals in sets to maximize efficiency. Provide detailed, to scale fabrication drawings of the compressor system and appurtenances that include dimensions, weld details, penetrations, installation details, and bill(s) of materials. Bill of materials shall

show materials of construction and coating and lining details. Submit steel metallurgical certifications for structural steel and certification that codes and standards are being met. Shop drawings must bear the stamp of a professional engineer licensed in the State of California.

Submit detailed product data sheets of all equipment, components, piping, hangers, valves, etc. Provide shop drawings for all valving, piping, connection flanges, instrumentation, and electrical components, including connection diagrams for all control valves. Provide a process flow schematic showing all equipment, components, valves and instrumentation and “redline” the legacy P&ID. Provide submittals in digital, PDF format that is high resolution (1200 dpi or higher). Ensure all non-applicable data and optional functions that are not being provided are deleted or clearly crossed out. Provide submittals to OC San for review. OC San will return submittals to the Contractor within twenty (20) working days or sooner. The Contractor shall revise submittals as directed and resubmit as necessary.

The following are the minimum submittals required for this project, as detailed herein:

1. Project Schedule
2. Equipment Shop Drawings and Data Sheets
3. Compressor System and Layout Drawings
4. Electrical Schematics/Wiring Diagrams
5. Foundation Design and or Modifications
6. Material Submittals for structural steel members
7. Installation, Operation, & Maintenance Manual(s)
8. Equipment Service Manual(s)
9. Commissioning Plan
10. Training Agenda

11.2 Equipment Service Manuals (ESM)

After acceptance of all product and shop drawing submittals, the Contractor shall submit a draft ESM, also known as Installation, Operation, and Maintenance Manual, for review and approval covering all mechanical, electrical, and instrumentation devices, and installation and operational details. Draft ESM shall be submitted 120 days prior to the start of Phase 1 – PRE-ORT. The Contractor shall revise, replace, remove and/or add documents to correct deficiencies and resubmit Final ESM prior to the start of Phase 2 – ORT and FAT for OC San review and approval. The Final ESM must be accepted by OC San 30 days before the start of Phase 2 – ORT and FAT. Revision to Final ESM may include changes necessary to reflect “as-built” conditions. ESM shall be provided in digital, PDF format that is high resolution acceptable to OC San. Ensure all non-applicable data and optional functions that are not being provided are deleted or clearly crossed out (i.e. Non-relevant configurations, sizes, materials, dash no.’s, etc. often shown on manufacturer datasheets). ESM shall include data sheets, warehouse spare equipment list, approved shop drawing submittals, installation, operation, and maintenance manuals including standard operating procedures for startup and shutdown of the compressors, supplemental drawings and instructions, and as-built information. Installation, operation, and maintenance manual section of ESM shall include recommendations for installation, adjustment, calibration and troubleshooting, step by step equipment specific procedures for starting, operating, and stopping equipment, preventative

maintenance procedures, overhaul instructions, drawings, complete parts lists and recommended spare parts, parts ordering information and special tools list.

12 Change Management

See Exhibit "F" – General Conditions.

13 Staff Assistance

The Contractor will be assigned a single point of contact on this project. Any meetings and/or correspondence related to this project shall be scheduled and approved by the OC San ENGINEER.

14 Safety and Health Requirements

The Contractor and any Subcontractors shall comply with all applicable provisions of the OC San Contractor Safety Standards, Federal OSHA, California OSHA, and Local regulations, whichever is most stringent.

14.1 Injury and Illness Prevention Program

The Contractor shall submit a copy of their written, Injury and Illness Prevention Program (IIPP). The IIPP must address responsibility, compliance, communication, hazard assessment, incident investigation, hazard correction, and training as required by Title 8, California Code of Regulations, Section 3203.

14.2 Site Specific Safety Plan

The Contractor shall prepare and submit a written, job Site Specific Safety Plan (SSSP) in accordance with the Sanitation District's Contractor Safety Standards. The SSSP must address the specific hazards and controls based on the scope of work. The SSSP must include specific controls that will be implemented to keep workers safe. The Contractor shall also prepare and submit safety programs where required by Cal OSHA. These programs may include fall protection, lockout tagout, confined space entry, and hazard communication. The safety plan must be specific to the work being completed and approved prior to the start of work (includes mobilization).

14.3 Contractor Safety Orientation

The Contractor shall attend a Contractor Safety Orientation (CSO) meeting prior to the start of work. The CSO is a Sanitation District safety orientation conducted between the Risk Management Division (safety and health) and the Contractor. The CSO is conducted once per year or as job conditions or scope of work changes. The Contractor shall participate in these meetings by providing work plans and other requested safety deliverables described below. The Contractor shall sign the JSSA documentation.

14.4 Lock Out Tag Out

The Contractor shall participate in the OC San LOTO process. OC San will isolate the structure and associated systems prior to Contractor entry into the structure. OC San will prepare a written energy control procedure for the structure. OC San will demonstrate hazardous energy has been controlled by walking each isolation point and reviewing the energy control procedure with the Contractor. The Contractor shall apply their own lock and tag to the OC San lock box upon acceptable and sign the energy control procedure. Each Contractor employee working in the structure must apply their own lock and tag.

14.5 Fall Protection

Fall protection shall be provided around all openings to protect Contractor employees and OC San. Fall protection at openings shall consist of a portable guardrail or other suitable barrier to prevent persons from falling to a lower level. Fall protection will be required for personnel when using Contractor provided extension ladders when accessing the structures. Fall protection will be required when working at heights greater than six (6) feet.

Scaffold erection may be required. In all cases, the scaffolding system shall be designed by a scaffold qualified person and erected, inspected and dismantled by a scaffold competent person. The scaffolding shall be supplied by a qualified, experienced scaffolding company. Contractor shall submit scaffold plans prior to use and must be approved by OC San.

14.6 Hot Work

Any activity producing spark, flame or heat will require an OC San issued hot work permit. The Contractor, depending on the activity, will be required to provide appropriate controls in accordance with OC San's hot work program. These controls may include a fire watch, 20-pound fire extinguisher, fire blankets, and atmospheric monitor.

14.7 Training Records

Contractor shall submit copies of its employee trainings records to Risk Management for retention.

14.8 PPE

Contractor shall wear Level D Personal Protective Equipment (PPE), which includes hard-toe work boots, safety glasses, hard hats, high-visibility safety vests, long pants, sleeved shirts, gloves, and hearing protection (as needed).

All work performed in the wastewater treatment plant requires a calibrated 4-gas monitor (CO, H2S, LEL, O2).

**LEGISTAR NO. 2023-3183
SUPPLEMENTAL ATTACHMENT
DIGESTER GAS COMPRESSOR DRYER REPLACEMENTS AT PLANT NO. 1 AND
PLANT NO. 2, PROJECT NO. FE23-01**

Figure 1:
Refrigerated gas dryer skid located in the basement of Plant No. 1 Gas Compressor Building. The unit is currently inoperable.

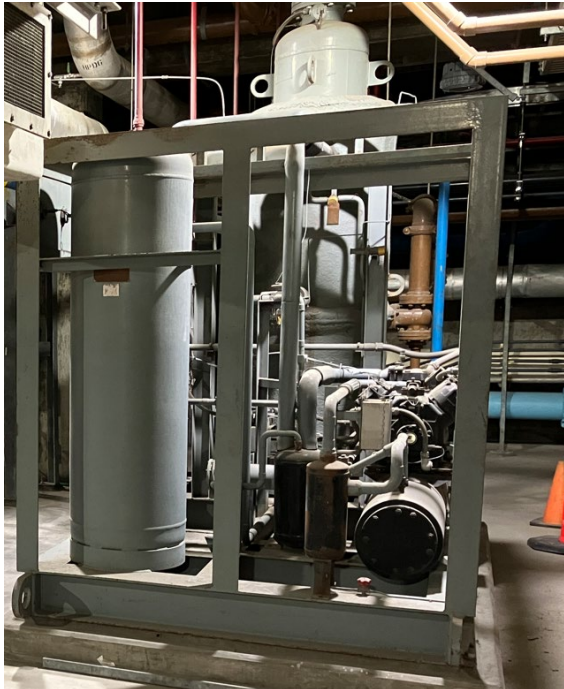


Figure 2:

Digester gas dryer heat exchanger skids located inside of Plant No. 2 Gas Compressor Building.



Figure 3:

Refrigeration skids located outside of Plant No. 2 Gas Compressor Building. One complete refrigerated gas dryer system consists of one heat exchanger skid (shown in Figure 2) and one refrigeration skid (shown in this figure).





OPERATIONS COMMITTEE

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

Agenda Report

File #: 2024-3490

Agenda Date: 4/3/2024

Agenda Item No: 5.

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

SUBJECT:

LOS ALAMITOS SUB-TRUNK AND WESTSIDE RELIEF INTERCEPTOR REHABILITATION, PROJECT NO. 3-64C

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION: 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.

BACKGROUND

The Orange County Sanitation District (OC San) is rehabilitating the Los Alamitos Sub-Trunk in the city of Cypress by replacing the existing 18-inch sewer with a new, larger 26-inch sewer pipeline in the same alignment. OC San currently has an easement with Forest Lawn Memorial-Park Association (FLMPA) for the portion of the alignment that traverses FLMPA's property. This part of the project will upsize the pipe using both open cut and trenchless methods, replace manholes to accommodate the new larger pipe, and repave the area above the pipe and manholes.

RELEVANT STANDARDS

- Maintain collaborative and cooperative relationships with regulators, stakeholders, and neighboring communities
- Maintain a proactive asset management program

PROBLEM

FLMPA has asked OC San to add sewer stub outs and pavement beyond what is required for the project, which will result in additional construction costs. OC San's proposed sewer construction requires a temporary construction easement and staging area from FLMPA to perform the work.

PROPOSED SOLUTION

Approve an agreement with FLMPA for the Los Alamitos Sub-Trunk and Westside Relief Interceptor Rehabilitation, Project No. 3-64C, to reimburse OC San for the additional project scope requested by FLMPA. The exact reimbursement cost will be based on the bid price of the requested work. This agreement also includes a staging area and temporary construction easement for OC San free of charge.

TIMING CONCERNS

If the approval of the agreement is delayed, it could delay the advertisement of the project, which is currently planned for early spring.

RAMIFICATIONS OF NOT TAKING ACTION

Without this agreement in place, OC San may have to reimburse FLMPA for a temporary construction easement and staging area.

PRIOR COMMITTEE/BOARD ACTIONS

N/A

ADDITIONAL INFORMATION

N/A

CEQA

This project is included in the "Rehabilitation of Western Regional Sewers Project No. 3-64" Environmental Impact Report (EIR) State Clearinghouse Number 2015111077. This EIR was certified by the Board of Directors and a Notice of Determination was filed on March 23, 2017.

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, Rehabilitation of Western Regional Sewers, Project No. 3-64) 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:

- Agreement
- Presentation

HK: jw

AGREEMENT BETWEEN THE ORANGE COUNTY SANITATION DISTRICT AND FOREST LAWN MEMORIAL-PARK ASSOCIATION FOR CONSTRUCTION ACCESS AND STAGING, SEWER INSTALLATION, AND PAVEMENT REHABILITATION

THIS AGREEMENT FOR CONSTRUCTION ACCESS AND STAGING, SEWER INSTALLATION, AND PAVEMENT REHABILITATION (“Agreement”), is made and entered into on this _____ day of _____, 2024 by and between the ORANGE COUNTY SANITATION DISTRICT, a County Sanitation District and public entity (“OCSAN”), and FOREST LAWN MEMORIAL-PARK ASSOCIATION, a California nonprofit mutual benefit corporation (“FOREST LAWN”). OCSAN and FOREST LAWN 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 wastewater collection, treatment, and disposal facilities within Orange County, California; and

WHEREAS, FOREST LAWN is a California nonprofit mutual benefit corporation; and

WHEREAS, OCSAN, as part of its Project 3-64C, is rehabilitating the Los Alamitos Sub-Trunk and Westside Relief Interceptor (the “Project”), which will necessitate some excavation and rehabilitation of roadways passing through FOREST LAWN property; and

WHEREAS, FOREST LAWN has agreed to provide OCSAN with access to its property for the duration of Project activities, including granting a temporary construction easement and providing a construction staging area as described and depicted in **Exhibit 1**; and

WHEREAS, FOREST LAWN has further agreed to relocate certain utility lines on its property in order to facilitate Project activities; and

WHEREAS, OCSAN has agreed to perform pavement rehabilitation work on portions of Cypress Drive and Guardian Drive on FOREST LAWN property that are not affected by Project activities (“Pavement Rehabilitation”), such work to include the construction of a two-inch grind and cap pavement section, an area of approximately 36,000 square feet, as described and depicted in **Exhibit B**; and

WHEREAS, the Parties agree that the contractor OCSAN selects to perform the Project shall also perform the Pavement Rehabilitation; and

WHEREAS, OCSAN agrees to contract and manage the Pavement Rehabilitation as part of the Project provided FOREST LAWN reimburses OCSAN for additional contract costs and eight percent staff labor costs associated with the Pavement Rehabilitation subject to the terms and conditions included herein; and

WHEREAS, OCSAN has further agreed to make additional improvements to FOREST LAWN property in and around the Project area, including tree removal and relocation of asbestos cement water lines.

NOW, THEREFORE, in consideration of the mutual promises set forth herein, the Parties hereto agree as follows:

Section 1: Recitals. The Recitals above are deemed true and correct, are hereby incorporated into this Agreement by this reference, as though fully set forth herein, and each Party to this Agreement acknowledges and agrees that it is bound by the same.

Section 2: OCSAN's Obligations.

- A. OCSAN shall be responsible for advertising, awarding, and administering a contract for the Project, in conformance with all applicable laws governing construction of public works by OCSAN. In connection with the foregoing, OCSAN will include in its bid package the Pavement Rehabilitation work required by FOREST LAWN, and will administer and enter into a construction contract to perform this work.
- B. OCSAN will remove eight large pine trees within the temporary construction easement area obstructing the Project construction work area. OCSAN will purchase eight 48-gallon box trees to replace the removed pines. These replacement trees will be delivered to FOREST LAWN at the conclusion of construction activities for the Project.
- C. OCSAN will relocate two 8-inch irrigation asbestos cement water lines that obstruct the Project construction area. During construction activities, OCSAN will coordinate with FOREST LAWN for a two-day shut down, at each location, of the irrigation main to facilitate tie-ins.
- D. OCSAN will comply, and will cause its agents and contractors to comply, with all applicable laws, regulations, and ordinances in connection with the work to be performed under this Agreement.
- E. All of OCSAN's construction work will be performed between either the period of May 15, 2025 and November 15, 2025 or May 15, 2026 and November 15, 2026. If the construction work requires additional time outside the periods stated above, OCSAN will provide a revised schedule to FOREST LAWN, which shall be subject to FOREST LAWNS's approval in its reasonable discretion.
- F. All work shall be performed at night starting at 6:00 pm and ending at 6:00 am each night, except for fusing of pipes. All open construction trenches will be plated or backfilled by the end of each night's work, all traffic control will be removed and open to allow traffic to use the roadways

within the Project work areas. This will be repeated for each night's work. The contractor will be allowed to work during the day for two consecutive days when fusing pipes starting at 6:00 am and ending at 6:00 pm each day, for each time a pipe is installed via pipe bursting.

- G. OCSAN shall by written agreement with the contractor(s) engaged by OCSAN to perform the work require that such contractor(s) carry out all work in a manner which will avoid interference with the business and services of Forest Lawn and require that all contractor(s) and subcontractor(s) performing any of the work shall (1) comply with the Forest Lawn construction rules and regulations included in the contract documents; (2) comply with reasonable rules requiring cessation of work (including cessation of delivery or removal of materials) to avoid interference with nearby funerals or processions; (3) ensure that if the vehicles of the contractor(s) and subcontractor(s) encounter a funeral procession or graveside service on Forest Lawn Memorial-Park roads, the vehicles must take an alternate route to avoid the service or procession or pull over to the curb and stop until the procession has passed or the service has concluded; (4) maintain at all times a dignified, proper and courteous attitude toward members of the public, contact with whom shall be avoided to the extent practicable; (5) follow instructions given by Forest Lawn's authorized personnel with respect to conduct at the property; (6) observe a nonoffensive dress code which requires wearing shirts at all times and forbids wearing short pants; (7) utilize at Forest Lawn's request, an assigned gate or entrance to the site, which gate or entrance may be changed from time to time at Forest Lawn's discretion; and (8) cooperate with union and nonunion personnel of other contractors, subcontractors or suppliers of Forest Lawn. OCSAN shall require by written agreement and take all steps necessary to ensure that none of the personnel of OCSAN or contractor(s) or subcontractor(s) (a) smokes anywhere on the property or (b) harasses, insults, intimidates, or bothers anyone on the property, including but not limited to Forest Lawn's employees. OCSAN shall require by written agreement that the contractor(s) engaged by OCSAN to perform the work incorporate the provision of this paragraph in their agreements with subcontractor(s) performing any portion of the work.
- H. OCSAN shall by written agreement with the contractor(s) engaged by OCSAN to perform the work require such contractor(s) to provide, in connection with any payments to such contractor, including as a condition precedent to payment in connection with the Pavement Rehabilitation work, (i) unconditional waivers and releases of mechanics liens, stop payment notices, bond claims and other claims from such contractor(s) and all subcontractors and suppliers for whom payment was made in the prior period for which payment was requested, in a form which substantially conforms to Section 8134 of the California Civil Code, acknowledging payment for all labor, services, equipment and materials supplied to the project before the end of the period for which application for payment is

made, and (ii) conditional waivers and releases from such contractor(s) and all subcontractors and suppliers for whom payment is sought, in a form which substantially conforms to Section 8132 of the California Civil Code, acknowledging their agreement to waive mechanics liens, stop payment notices, bond claims and other claims upon payment for materials furnished in the period for which application for payment is made. OCSAN such provide copies of such lien waivers and releases to FOREST LAWN upon receipt.

Section 3: FOREST LAWN's Obligations.

- A. FOREST LAWN hereby grants OCSAN, at no cost, a temporary construction easement and staging area as described and depicted in **Exhibit A**, for the duration of Project construction until all work within FOREST LAWN property is completed.

- B. OCSAN does not permit sewer lateral connections to its regional sewer facilities. OCSAN will install two sewer stub-outs on its Project rehabilitated sewer facilities at the locations described in **Exhibit 2B & 2C** to permit the connection of City of Cypress sewer mains to serve FOREST LAWN in the future. FOREST LAWN will submit an application to OCSAN for a sewer connection permit prior to construction and connection of any sewer serving FOREST LAWN that connects to OCSAN sewer facilities at the stub-outs. FOREST LAWN will work with the City of Cypress to sign the application as the applicant and submit to OCSAN for approval.

- C. Following OCSAN's removal of the two 8-inch irrigation asbestos cement water mains (as referenced in Section 2 of this Agreement), FOREST LAWN will sign the manifest as the owner of the hazardous material once the conflicting segment of pipe is removed and ready for disposal.

- D. Following OCSAN's delivery of the eight 48-gallon box trees (as referenced in Section 2 of this Agreement), FOREST LAWN will, at its sole expense, replant these trees outside OCSAN's easement area.

Section 4: Payment for Work. Within forty-five (45) days of FOREST LAWN accepting the Pavement Rehabilitation work as complete, and provided that FOREST LAWN receives an invoice for the work from OCSAN, FOREST LAWN will remit payment to OCSAN for the actual, final costs for the Pavement Rehabilitation work, including (1) any change order(s) associated with this work, provided such change orders are approved by Forest Lawn in writing in advance of performance of such changed work and (2) OCSAN staff time required to manage the Pavement Rehabilitation work (collectively, "Costs"), provided that Costs which may be invoiced by OCSAN for payment by FOREST LAWN and which are eligible for payment by FOREST LAWN shall be limited to (1) and (2) above and the following:

1. Wages of construction workers directly employed by the Contractor(s) engaged to perform the Pavement Rehabilitation work only.
2. Wages or salaries of the supervisory and administrative personnel of the Contractor(s) engaged to perform the Pavement Rehabilitation work when stationed at the site for performance of the Pavement Rehabilitation work only.
3. Payments made by the Contractor(s) engaged to perform the Pavement Rehabilitation work only in accordance with the requirements of subcontracts or purchase orders on account of the Pavement Rehabilitation work only.
4. Costs, including transportation and storage, of materials and equipment incorporated or to be incorporated in the Pavement Rehabilitation work only (excluding the cost of owner-procured equipment).
5. Costs of transportation, storage, installation, maintenance, dismantling and removal of materials, supplies, temporary facilities, machinery, equipment and hand tools not customarily owned by construction workers that are provided by the Contractor(s) at the site and fully consumed in the performance of the Pavement Rehabilitation work only.
6. Rental charges for temporary facilities, machinery, equipment and hand tools not customarily owned by construction workers that are provided by the Contractor(s) at the site for performance of the Pavement Rehabilitation work only. The total rental cost of any Contractor-owned item may not exceed the purchase price of any comparable item.
7. Costs of removal of debris arising from the Pavement Rehabilitation work only from the site of the Pavement Rehabilitation work and its proper and legal disposal.
8. Costs of document reproductions, facsimile transmissions and long-distance telephone calls, postage and parcel delivery charges, telephone service at the site and reasonable petty cash expenses of the site office to the extent incurred for performance of the Pavement Rehabilitation work only.
9. Costs of materials and equipment suitably stored off the site at a mutually acceptable location for performance of the Pavement Rehabilitation work only.
10. Costs of temporary utilities (water, gas, electricity, sewer, etc.) necessary for the performance of the Pavement Rehabilitation work only.
11. Costs of the premiums for all insurance and bonds that the Contractor(s) are required to procure in the amount attributable to the Pavement Rehabilitation work only.
12. Fees and assessments for permits not obtained by FOREST LAWN and for inspections which the Contractor(s) are required to procure, and fees of laboratories for any tests required for the Pavement Rehabilitation work only, except those related to defective or nonconforming Pavement Rehabilitation work.

13. Reasonable costs incurred by the Contractor(s) in taking action to prevent threatened damage, injury or loss in case of an emergency affecting the safety of persons and property in connection with the Pavement Rehabilitation work only.

No costs of the Pavement Rehabilitation work except those specified above shall be invoiced by OCSAN or paid by FOREST LAWN.

Prior to performance of any Pavement Rehabilitation work, OCSAN shall provide to FOREST LAWN the contracted price with the Contractor(s) engaged to perform the Pavement Rehabilitation work and an estimate of the costs of OCSAN staff time, 4 percent (4%) required to manage the Pavement Rehabilitation work. In the event that the total of such costs exceed the amount of \$813,000 the "Pavement Rehabilitation Work Estimate", in addition to and not in limitation of any rights it may have under this Agreement or applicable law FOREST LAWN shall have the option, within 10 days of being provided with the Pavement Rehabilitation Work Estimate, to terminate this Agreement in part with respect to the Pavement Rehabilitation work by written notice to OCSAN. In the event of such termination, FOREST LAWN shall have no further obligation of any kind, including with respect to payment, in connection with the Pavement Rehabilitation work.

Section 5: Insurance. FOREST LAWN and OCSAN, and each of their officials, officers, employees, and agents, shall be named as additional insureds in all construction contract, commercial general liability, and automobile liability insurance policies relating to the Project. OCSAN shall by written agreement require the contractor(s) engaged by OCSAN to perform the work, and shall require such contractor(s) to include in contracts with subcontractor(s), provisions requiring such contractor(s) and subcontractors to maintain throughout the performance of the work at least the following insurance in the following limits:

1. Commercial General Liability, including Operations, Contractual, Contractor's Protective Liability, and Completed Operations coverages- occurrence basis with not less than \$2,000,000 combined single limit for bodily injury and property damage;
2. Comprehensive Automobile Liability covering Contractor's owned, non-owned and hired vehicles used in the performance of the work with limits not less than \$1,000,000 bodily injury and \$500,000 property damage; and
3. Workers compensation at statutory limits and employers liability insurance in an amount not less than \$1,000,000 each accident, \$1,000,000 each disease, policy limit \$1,000,000 each disease/each employee.

Section 6: Indemnification.

- A. OCSAN hereby agrees to release, indemnify, protect, defend and hold FOREST LAWN, its officers and employees harmless from and against any and all claims, loss, demands, expenses, damages, or liabilities whatsoever for injuries to or death of persons or damage to property in any manner arising out of the exercise or enjoyment by OCSAN (and/or contractors and/or subcontractors performing the Work) of any right or permission

herein given or by reason of any failure on the part of OCSAN to keep or perform any of the terms or conditions of this Agreement. OCSAN shall by written agreement include in contracts with contractor(s) engaged by OCSAN to perform the work, and require such contractor(s) to include in contracts with subcontractor(s) engaged in to perform the work, provisions requiring such contractor(s) and subcontractor(s) to defend, indemnify and hold harmless FOREST LAWN and its officers and employees from and against any and all claims, loss, demands, expenses, damages, or liabilities whatsoever for injuries to or death of persons or damages to property in any manner arising out of the negligent acts or omissions of such contractor(s) and/or subcontractor(s) in connection with, arising from, or in any manner relating to the work.

- B. FOREST LAWN hereby agrees to release, indemnify, protect, defend and hold OCSAN, its officers, agents, contractors and employees harmless from and against any and all claims, loss, demands, expenses, damages, or liabilities whatsoever for injuries to or death of persons or damage to property in any manner arising out of the exercise by FOREST LAWN of any obligation or failure on the part of FOREST LAWN to keep or perform any of the terms or conditions of this Agreement.

Section 7. Term. This Agreement will be in full force and effect until the specified obligations of both Parties have been fulfilled or until the Parties mutually agree to terminate this Agreement in writing.

Section 8: Agents. Any contractor or subcontractor performing or providing services in connection with the work described herein on behalf of either Party will be conclusively deemed to be the servant and agent only of the Party that employed or contracted with said contractor or subcontractor.

Section 9: Notices. All notices or other communications required or permitted hereunder will be in writing and will be personally delivered or sent by registered or certified mail, postage prepaid, return receipt requested, delivered or sent by electronic transmission, and will be deemed received upon the earlier of: (i) the date of delivery to the address of the person to receive such notice if delivered personally or by messenger or overnight courier; (ii) three (3) business days after the date of posting by the United States Post Office if by mail; or (iii) when sent if given by electronic transmission with confirmation of receipt. Any notice, request, demand, direction, or other communication sent by electronic transmission must be confirmed within forty-eight (48) hours by letter mailed or delivered. Notices or other communications will be addressed as follows:

To OCSAN:	Orange County Sanitation District 10844 Ellis Avenue Fountain Valley, CA 92708 Attention: Hardat Khublall, Project Manager Phone: 714-593-7377 E-mail: hkhublall@ocsan.gov
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To FOREST LAWN: FOREST LAWN Memorial Park Association
1712 S. Glendale Ave.
Glendale, CA 91205
Attention: William Hahn
VP Architecture & Engineering
Phone: 323-551-5035
E-mail: whahn@forestlawn.com

Section 10: 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 11: Cooperation. The Parties shall cooperate with each other to achieve the purpose of this Agreement and shall execute such other and further documents and take such other and further actions as may be necessary or convenient to fulfill their obligations described herein. The Parties further agree to use all reasonable efforts to cause the fulfillment of the conditions to the Parties' obligations hereunder and to obtain as promptly as possible all approvals from each and every third party, whether private or governmental, required in connection with the work contemplated by this Agreement.

Section 12: No Third Party Beneficiaries. This Agreement is entered into by and for FOREST LAWN and OCSAN, and nothing herein is intended to establish rights or interests in individuals or entities not a party hereto.

Section 13: 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 14: Governing Law. This Agreement will be governed by the laws of the State of California.

Section 15: 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 16: 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 17: 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 18: 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 18: Agreement Execution and Authorization. Each of the undersigned represents and warrants that he or she is duly authorized to execute and deliver this Agreement and that such execution is binding upon the entity on whose behalf he or she is executing this Agreement.

Section 20: Counterparts Deemed Original: This Agreement may be executed in one or more counterparts (including by e-mail, other electronic transmission, and/or facsimile), all parties need not be signatories to the same documents, and all counterpart signed documents shall be deemed to be one and the same original instrument.

[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 below written.

ORANGE COUNTY SANITATION DISTRICT

By _____
Chad P. Wanke Date
Chair of the Board

ATTEST:

By _____
Kelly Lore Date
Clerk of the Board

APPROVE AS TO FORM:

By _____
Bradley Hogin
General Counsel

FOREST LAWN MEMORIAL-PARK
ASSOCIATION

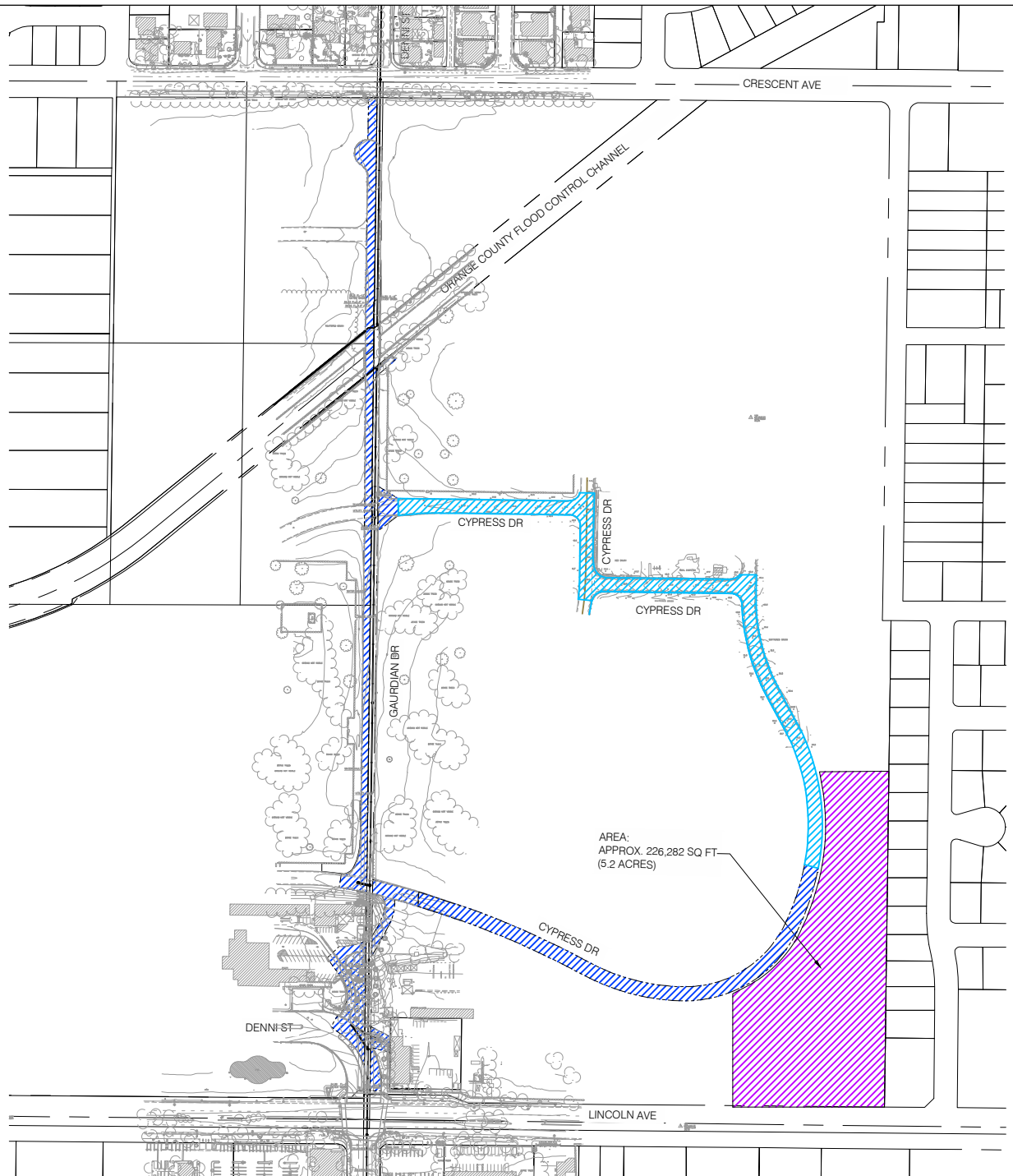
By _____
Darin B. Drabing Date
President and CEO

EXHIBIT “1”

Staging and Temporary Construction Easement Area

(See attached.)

DMC: \\na.aecom.com\ms\AMER\Orange\USORAI\DCS\Projects\WTR\0448317_3-64C-CAD\VIS2\Construction\SHEETS\Figures\Forest Lawn Cemetery\TCE-Staging Exhibit\3-64C-TCE-Staging Exhibit 1.dwg Layout Name: FIGURE 1 - Plotted by: Meja, Danny Date: 7/25/2024 - 2:35 PM
 XREFS: G:\BIB\K111 - 3-64C-V-SUB02 - 3-64C-HALNOI-RCH2 - CPT 20220202\Forest Lawn Supp topo 152844_21236_22_206-1 - 22-3496_topo_SUPP_TPO_20220504 - 22-3496_DTM_FL_SUPP_TPO_20220504 - 22-3496_topo_SUPP_TPO_20220504 - 22-3496_topo_SUPP_TPO_20220504 - 3-64C-V-TPO01 IMAGES



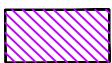
LEGEND:



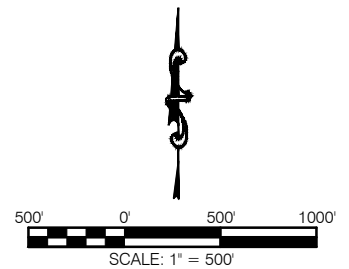
TEMPORARY CONSTRUCTION EASEMENT



ALTERNATE TEMPORARY CONSTRUCTION EASEMENT



CONSTRUCTION STAGING / LAY-DOWN AREA



AECOM Technical Services, Inc.
 999 W TOWN & COUNTRY ROAD
 ORANGE, CA 92668
 T 714-567-2400 F 714-567-2441

www.aecom.com

LOS ALAMITOS SUB-TRUNK AND WESTSIDE RELIEF INTERCEPTOR REHABILITATION

FOREST LAWN STAGING AREA AND TCE

OC SAN PROJECT NO.

3-64C

FIGURE

1

EXHIBIT “2, 2A, 2B & 2C”

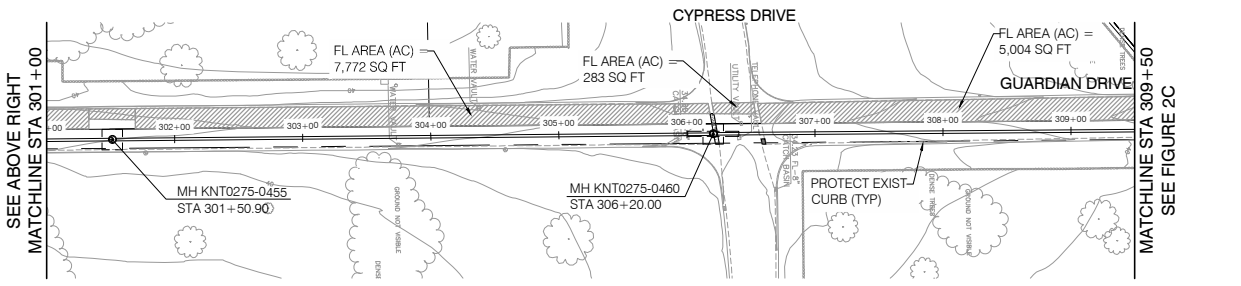
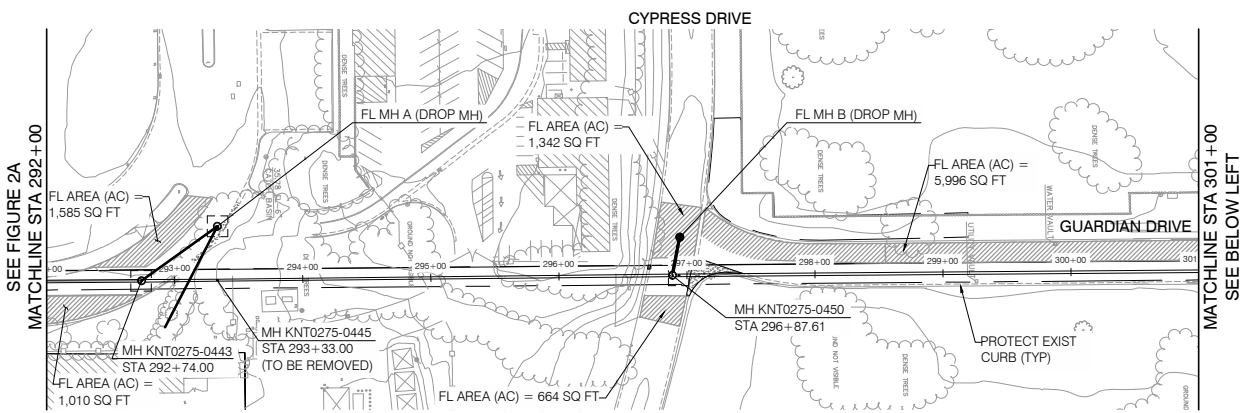
Forest Lawn Pavement Rehabilitation Area

EXHIBITS “2B & 2C”

Location of Sewer Stubs

(See Attached)

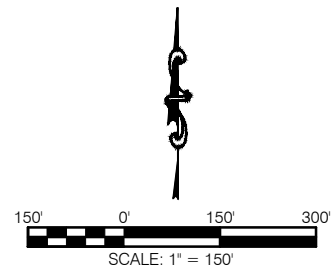
DMS: \\va.aecom.com\is\amer\Orange-USRA\USRA\Projects\WIR\6448317 (3-64)\Contract3-64\900-6448317-Forest Lawn Cemetery\Drawings\20220408 - 3-64C-V-TOP001 - 3-64C-C-PAVE01-FIGURE IMAGES
 PLOTTED BY: MEJA, DANNY, DATE: 9/20/2022, 3:16 PM
 FILE: \\va.aecom.com\is\amer\Orange-USRA\USRA\Projects\WIR\6448317 (3-64)\Contract3-64\900-6448317-Forest Lawn Cemetery\Drawings\20220408 - 3-64C-V-TOP001 - 3-64C-C-PAVE01-FIGURE IMAGES
 PLOT DATE: 9/20/2022, 3:16 PM
 PLOT BY: MEJA, DANNY



LEGEND:



ADDITIONAL PAVEMENT RESURFACING REQUESTED BY FOREST LAWN CEMETERY. CONTRACTOR SHALL REMOVE AND REPLACE ASPHALT PER DETAIL A ON DWG C7001 AND IN ACCORDANCE WITH SPECIFICATION SECTION 02550. CONTRACTOR SHALL RESTORE THERMOPLASTIC STRIPING, DELINEATORS, PAVEMENT MARKINGS OR PAINTED CURBS IMPACTED BY CONSTRUCTION ACTIVITIES PER SSPWC.



AECOM

AECOM Technical Services, Inc.
 999 W TOWN & COUNTRY ROAD
 ORANGE, CA 92868
 T 714-567-2400 F 714-567-2441

www.aecom.com

**LOS ALAMITOS SUB-TRUNK AND WESTSIDE
 RELIEF INTERCEPTOR REHABILITATION**
FOREST LAWN PAVEMENT RESURFACING PLAN
STA 292+00 TO STA 309+50

OC SAN
 PROJECT NO.

 3-64C

FIGURE

2B

70
1954 - 2024

Orange County
Sanitation District
70th Anniversary

Los Alamitos Sub-Trunk and Westside Relief Interceptor Rehabilitation, Project No. 3-64C

Presented by:
Martin Dix, Engineering Manager

Operations Committee
April 3, 2024


1

Project Location

- Cypress
 - Forest Lawn Cemetery
- Los Alamitos
- La Palma

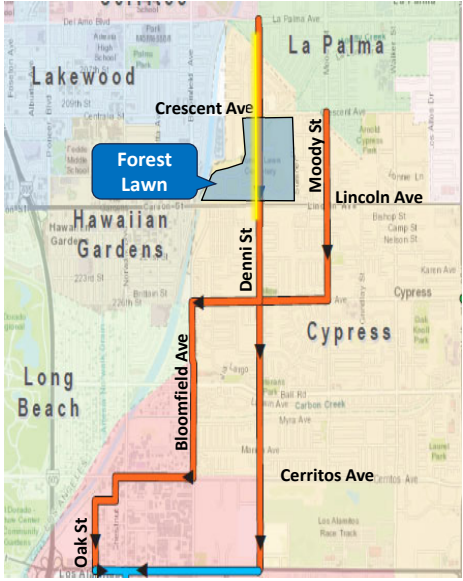
2

Project Limits




Pipeline	
Open Cut	620 ft
Pipe Bursting	4,360 ft
CIPP	120 ft
Grout Injection	30,000 ft

Manholes	
Replacement	24
Rehabilitation	71
Abandonment	1
New Installation	4

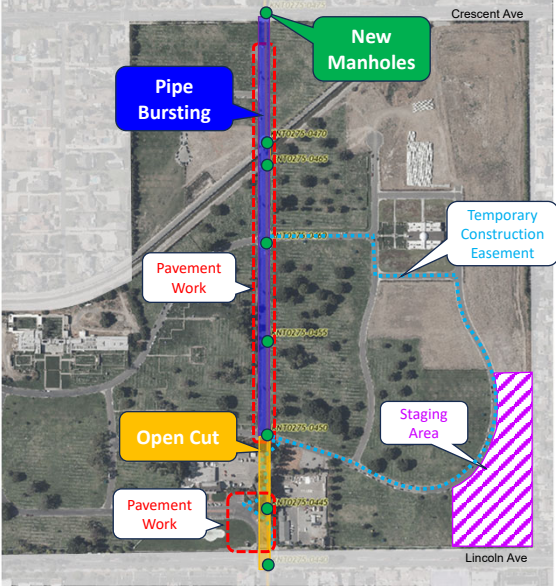


3

Work in Forest Lawn Cemetery




- Night work
- May to November
- Existing 15-foot wide easement
- Need additional area
 - Temporary construction easement
 - Staging

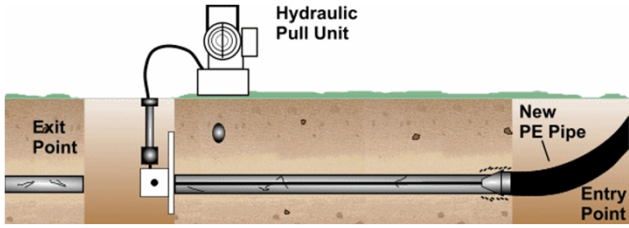


4

Pipe Construction Methods

Open-Cut Replacement
620 ft





Orange County San Pedro District 70th Anniversary

5

5

Forest Lawn Agreement





- Splitting paving costs for roadway (2" grind and cap)
- Reimburse for 2 sewer stub-outs
- Temporary construction easement and staging area
- Reimburse 4% fee

Orange County San Pedro District 70th Anniversary

6

6

Recommendation

Orange County Sanitation District
70th Anniversary

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.

7

7

Orange County Sanitation District
70th Anniversary

Questions?

1954 - 2024

8

8



OPERATIONS COMMITTEE

Agenda Report

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

File #: 2024-3380

Agenda Date: 4/3/2024

Agenda Item No: 6.

FROM: Robert Thompson, General Manager
Originator: Wally Ritchie, Director of Finance

SUBJECT:

FY 2024-25 AND 2025-26 OPERATING BUDGET EXPENDITURES

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION:

Information Item.

BACKGROUND

Discussion of the Orange County Sanitation District (OC San) FY 2024-25 and FY 2025-26 Budget development process was initiated at the January 17, 2024 Board of Directors meeting. During this process, staff provides presentations to the Administration and Operations Committees, focusing on various areas of the budget. Staff will make a brief presentation on the proposed expenditure details of the Operating Budget at the Committee meeting.

The Operating and Capital Budgets, effective July 1 of this year, will be presented for adoption at the June 26, 2024 Board meeting.

RELEVANT STANDARDS

- Produce Ops and CIP budgets every two years, with annual update

PRIOR COMMITTEE/BOARD ACTIONS

N/A

ADDITIONAL INFORMATION

N/A

ATTACHMENT

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

- FY 2024-25 and 2025-26 Budget Expense Update
- FY 2024-25 and 2025-26 Budget Expense Summary
- Presentation

**FY 2024-25 and FY 2025-26 BUDGET EXPENSE – ADDITIONAL DETAIL
(In Millions)**

	<u>Projected 2023-24</u>	<u>Proposed 2024-25</u>	<u>Proposed 2025-26</u>
1) SALARIES, WAGES & BENEFITS	\$113.6	\$122.8	\$129.3
1a) Salaries & Wages	\$82.8	\$89.8	\$94.4

Salaries for 655 full-time equivalent (FTE) positions have been approved in the current budget and 662 FTE are included in the proposed budgets. The increase is attributable to new employees, step advancements and planned salary increases per bargaining agreements. The Vacancy Factor was set at 5 percent based on trend information.

1b) Leave Payoffs	\$2.7	\$3.0	\$3.1
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Leave Payoffs for retirements are anticipated to be in line with recent history reflecting retirements of long-term employees.

1c) Overtime	\$2.9	\$3.1	\$3.2
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Overtime is proposed to remain relatively flat. Of the total proposed, \$2.8 million is budgeted in Operations and Maintenance primarily for required overtime as the plants are in operation 24/7 (vacation, sick, shift overlap), emergencies, unscheduled maintenance, backlog, and off-shift construction support. The remaining is budgeted in other divisions and has remained essentially the same.

1d) Orange County Emp. Ret. System	\$11.7	\$12.2	\$12.7
---	---------------	---------------	---------------

OC San employees are members of the Orange County Employees' Retirement System (OCERS). The employer's required contribution rates slightly increased this year after remaining relatively flat following the payoff of OC San's unfunded actuarial accrued liability beginning in the fall of 2019.

1e) Group Insurance	\$11.0	\$12.2	\$13.3
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Includes Medical, Dental, Vision, Life Insurance, Medicare, and Disability. The proposed group insurance budget is approximately \$17,500 per employee (662 proposed full-time equivalent positions).

1f) Benefits, Other	\$2.5	\$2.5	\$2.6
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Includes Workers' Compensation, Tuition Reimbursement, Development Pay, and Uniform Rental. Workers' Compensation (\$0.9 million in FY 2023-24) is used to maintain the level of accumulated reserves within the Workers' Compensation self-insurance funds. The Development Pay Program (\$725,000) is intended to promote employee efforts that increase job knowledge, skills, and abilities.

FY 2024-25 and FY 2025-26 BUDGET EXPENSE – ADDITIONAL DETAIL
(In Millions)

	<u>Projected 2023-24</u>	<u>Proposed 2024-25</u>	<u>Proposed 2025-26</u>
2) REPAIRS AND MAINTENANCE	\$35.1	\$36.3	\$35.7
2a) Materials & Services	\$27.7	\$28.0	\$27.3

The material and services budget supports the maintenance of the collection system and the treatment plants. Materials and services for the collections system include street overlays/manhole raising, manhole cover purchases, surveying services, and easement improvements and other materials and services. Collections has a multiple repair projects in the budgeted years: including siphon cleaning (\$1.0M). Plant maintenance materials and services include: manhole rehab and replacement services (\$1.3M), digester cleaning (\$1.7M), and materials and services to maintain OC San’s fleet (\$0.7M).

The budget for basic scheduled, predictive, and preventive maintenance and emergency maintenance are included in these budgets which are proposed based on historical experience and cost trends.

2b) Service Agreements	\$7.4	\$8.3	\$8.4
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Service contracts are mostly either computer-related or O&M maintenance-related. Major contracts for Information Technology (\$3.6M) include IBM Software Maintenance, Microsoft Enterprise License Agreements, Cisco Smart Net, Maximo support, disaster recovery hardware and software support, Oracle support, and various smaller service agreements. Contractor Support Services in the Operations and Maintenance Department manages all service contracts for the maintenance of the collection system and treatment plants (\$4.4M). These service agreements include crane certification, engine monitoring systems, door and gate maintenance, scale certification, tree trimming, pest control, fire extinguisher and fire sprinkler certification, Uninterruptible Power Supply electrical maintenance, scaffolding, and various other plant maintenance and service maintenance agreements covering various equipment located throughout OC San. Additional service maintenance agreements covering various equipment items are budgeted throughout OC San.

3) OPERATING MATERIALS & SUPPLIES	\$30.8	\$31.2	\$31.8
3a) Chemical Coagulants	\$15.8	\$15.9	\$16.3

Anionic Polymer – Anionic polymer is added to the primary clarifiers in combination with ferric chloride to enhance primary clarifier performance. Proposed costs are increasing from the FY 2023-24 Adopted Budget and the projected usage will remain approximately the same. The proposed anionic polymer budget is \$695,500 for FY 2024-25 and \$716,000 for FY 2025-26.

FY 2024-25 and FY 2025-26 BUDGET EXPENSE – ADDITIONAL DETAIL
(In Millions)

Projected	Proposed	Proposed
<u>2023-24</u>	<u>2024-25</u>	<u>2025-26</u>

Cationic Polymer – Cationic polymer is added to digested sludge prior to dewatering to improve the sludge and water separation process. Cationic polymer is also added to the waste activated sludge dissolved air flotation thickeners (DAFTs) to improve solids coagulation. The cationic polymer budget is \$6.5 million for FY 2024-25 and \$6.6 million for FY 2025-26.

Ferric Chloride – Ferric chloride is an iron salt which is used to increase the solids removal efficiencies in the primary treatment process and to control digester hydrogen sulfide. As the amount of ferric chloride is optimized in primary treatment, additional amounts of ferric chloride are added to the digesters to control hydrogen sulfide. The proposed ferric chloride budget for is \$8.7 million for FY 2024-25 and \$9.0 million for FY 2025-26, increasing from the projected amount for FY 2023-24.

3b) Odor Control	\$10.1	\$10.4	\$10.5
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Sodium Hydroxide (Caustic Soda) – Caustic soda (25%) is used in the foul air scrubbers and in OC San’s main trunk lines (50%) tributary to the treatment plants. The total proposed caustic soda budget is \$843,000 for FY 2024-25 and \$852,000 for FY 2025-26.

Muriatic Acid – Muriatic Acid (Hydrochloric Acid) is used to backwash the media in the foul air scrubbers, associated piping, and pumps. This cleans deposits caused by hard water, sulfides from the reaction with the foul air, and caustic soda used in the scrubbing process. Muriatic Acid is also used as a method for cleaning polymer tanks. The proposed budget is \$23,000 for FY 2024-25 and \$24,000 for FY 2025-26.

Magnesium Hydroxide, Trunklines – Magnesium hydroxide reduces the formation of hydrogen sulfide in the collection system, which causes odor and corrosion. Contract services include supply, tanks and delivery equipment, operational monitoring, sampling, reporting, and on-going maintenance services for odor control chemical dosing systems within the wastewater collection and conveyance system. The proposed budget is \$3.2 million for both FY 2024-25 and FY 2025-26.

Ferrous Chloride, Trunklines – Ferrous Chloride is used in the trunks to reduce hydrogen sulfide generation. This contract provides supply, tanks and delivery equipment, operational monitoring, sampling, reporting, and on-going maintenance services for odor control chemical dosing systems within the wastewater collection and conveyance system. The previously approved and proposed budget is \$4.1 million for both FY 2024-25 and FY 2025-26.

Calcium Nitrate, Trunklines – Calcium nitrate is a biological approach to controlling odors in wastewater. It provides the naturally occurring bacteria with an alternate source

**FY 2024-25 and FY 2025-26 BUDGET EXPENSE – ADDITIONAL DETAIL
(In Millions)**

	<u>Projected</u>	<u>Proposed</u>	<u>Proposed</u>
	<u>2023-24</u>	<u>2024-25</u>	<u>2025-26</u>

of oxygen which, when metabolized, produces nitrogen gas as a byproduct rather than the sulfides produced by the naturally occurring sources of oxygen. This contract provides supply, tanks and delivery equipment, operational monitoring, sampling, reporting, and on-going maintenance services for odor control chemical dosing systems within the wastewater collection and conveyance system. is \$852,000 for both FY 2024-25 and FY 2025-26.

Bleach, Treatment Plant Odor Control – Bleach is used in treatment plant odor control scrubbers and has replaced more expensive chemicals. The proposed budget is \$1.4 million for both FY 2024-25 and FY 2025-26.

3c) Disinfection	\$0.6	\$0.6	\$0.6
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Sodium Hypochlorite (Bleach) – The treatment plant bleach usage is for disinfection of plant water and the control of filamentous organisms in activated sludge in the secondary treatment process. The proposed budget is \$597,000 for FY 2024-25 and \$614,000 for FY 2025-26.

3d) Tools and Safety Equipment / Tools	\$1.9	\$1.7	\$1.7
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O&M uses 72% of these budgets with another 13% budgeted in Risk Management. Costs include various personal protective equipment items required for job safety. Reflective vests are now required in the working treatment plants and collection system, increasing expenses for safety equipment.

3e) Laboratory Chemicals and Supplies	\$0.7	\$0.8	\$0.8
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Approximately 84% of this budget supports the Environmental Laboratory purchases of glassware, filtration supplies, solvents used for organic extractions, acids and bases used in metals digestion and glassware cleaning, reagents, a variety of standards used in quality assurance of the tests, specialty gases, microbiology supplies and growth media, chromatography columns, test organisms for bioassay, toxicity, and various other laboratory supplies.

3f) Gas, Diesel, and Oil	\$0.7	\$0.9	\$0.9
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Gasoline, compressed natural gas, diesel, and oil are used in the operation of mobile equipment, within generators and other operating equipment. The future price of gasoline and natural gas are the major impacts to these budgets.

3g) Other	\$1.0	\$0.9	\$1.0
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Other smaller operating expenses are collectively reported within this line item such as janitorial supplies, miscellaneous operating supplies, and property tax fees.

FY 2024-25 and FY 2025-26 BUDGET EXPENSE – ADDITIONAL DETAIL
(In Millions)

	<u>Projected 2023-24</u>	<u>Proposed 2024-25</u>	<u>Proposed 2025-26</u>
4) CONTRACTUAL SERVICES	\$22.1	\$23.5	\$24.1
4a) Solids Removal	\$14.0	\$14.5	\$14.8

Biosolids – The biosolids unit cost is mainly driven by the nature of the energy intensive thermal conversion processes (Drying + Pyrolysis). Increased unit costs are expected.

4b) Other Residual Solids and Waste	\$1.0	\$1.2	\$1.2
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The other residual solids and waste category includes disposal costs for grit and screening waste, digester cleaning waste, and hazardous materials. The Grit and Screening budget includes supplying bins to collect then haul and dispose of grit, screenings, and drying bed material to a landfill. The grit is generated from the grit chambers, and the screenings is the material collected off the bar screens. Drying bed material is typically made up of the material cleaned out of pipes in the collection system by OC San crews and other city crews in OC San’s service area.

4c) Groundskeeping/Janitorial/Security	\$3.8	\$4.6	\$4.9
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The Security Services budget is \$2.5 million based on the level of security services provided to OC San. The proposed budget increase is related to extra janitorial services and increased security requirements for the new Headquarters facility.

4d) County Service Fee	\$0.4	\$0.4	\$0.4
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The County Service Fee is the fee charged by the County of Orange for the inclusion of OC San’s sanitation fees on the County of Orange Property Tax Bill and for the collection of these fees by the County on behalf of OC San.

4e) Oxygen Plant Operations	\$1.2	\$1.3	\$1.4
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OC San’s Oxygen Plant has been decommissioned and currently, the activated sludge plant operates solely with purchased oxygen.

4f) Temporary Services	\$0.5	\$0.4	\$0.3
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Temporary Services are expected to remain steady.

4g) Outside Lab Services	\$0.4	\$0.4	\$0.4
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OC San contracts out certain laboratory services that are not cost-efficient to perform in-house. Examples include air quality analyses, oil analyses for transformers and

FY 2024-25 and FY 2025-26 BUDGET EXPENSE – ADDITIONAL DETAIL
(In Millions)

	<u>Projected</u> <u>2023-24</u>	<u>Proposed</u> <u>2024-25</u>	<u>Proposed</u> <u>2025-26</u>
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internal combustion engines, contaminants of potential concern, and hi-resolution mass spectroscopy. As approximately half of OC San biosolids are reused in Arizona; contracted testing for those biosolids must meet the State of Arizona requirement for analyses to be performed in an Arizona certified laboratory.

4h) Contracted Services, Other	\$0.8	\$0.7	\$0.7
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Contracted services that are in support of operating and maintaining the collection system and the treatment plants and have been moved into the operations and maintenance service agreements line item. The budgeted amount is for various engineering support contracts.

5) UTILITIES	\$16.1	\$16.1	\$16.4
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5a) Power	\$11.3	\$11.3	\$11.5
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Electricity – The estimated consumption and resulting costs for electrical energy purchased for the FY 2023-24 total \$11.345.932. This estimate includes only running 2 of the 3 CenGen engines and assumes savings for battery utilization at Plant No.1. This budgetary number contains no contingency and anticipates moderating energy costs due to purchase contracts.

5b) Water	\$1.3	\$1.3	\$1.3
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Potable Water – The potable water budget includes the water supplied by the City of Fountain Valley for Plant No. 1 and the City of Huntington Beach for Plant No. 2. Approximately 5% of the potable water at Plant No. 1 is used for domestic uses and less than 1% is used for irrigation. Most of the irrigation at both plants uses reclaimed water. Less than 1% of the potable water used at Plant No. 2 is for domestic uses due to the relatively small number of employees at Plant No. 2.

5c) Natural Gas	\$2.9	\$2.9	\$3.0
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For FY 2023-24, the estimated natural gas to be purchased from Southern California Gas Company and the gas marketer (i.e., Constellation Energy) is \$2.9M.

The gas unit cost is anticipated to moderate due to long term contracts. The market remains volatile for natural gas price in Southern California and will be monitored.

The “core subscription” is natural gas purchased directly from The Gas Company and used mainly for building heating and supplemental process heating. The natural gas used for Central Generation is purchased from a gas marketer, Constellation Energy,

FY 2024-25 and FY 2025-26 BUDGET EXPENSE – ADDITIONAL DETAIL
(In Millions)

	<u>Projected</u> <u>2023-24</u>	<u>Proposed</u> <u>2024-25</u>	<u>Proposed</u> <u>2025-26</u>
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and transported through The Gas Company conveyance system at stipulated cost. The projected prices include the costs that will be paid to both entities.

5d) Telephone	\$0.6	\$0.6	\$0.6
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Included in this line item is the funding for over 600 landlines and mobile phones for management and field staff, as deemed appropriate.

6) PROFESSIONAL SERVICES	\$5.4	\$7.9	\$7.1
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6a) Legal Services	\$1.7	\$1.5	\$1.5
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Legal services are services primarily provided by General Counsel for general legal support. Other specialized legal services from other firms are also included in this budgeted amount.

6b) Engineering Services	\$1.5	\$1.7	\$1.8
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These services augment technical support for critical projects. Requested engineering services include support for corrosion assessment; coatings and cathodic protection; engineering support staffing for civil, mechanical, and instrumentation programs; and support to maintenance projects.

6c) Advocacy Efforts	\$0.2	\$0.3	\$0.3
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These are consultant services for promoting OC San's interests in Sacramento and Washington D.C concerning legislation and funding.

6d) Audit and Accounting	\$0.2	\$0.2	\$0.3
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These services represent the cost for OC San's independent annual financial audit and contracted internal auditing services.

6e) Software Program Consultant	\$0.5	\$1.0	\$0.8
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These support costs are required to supplement programming staff as new software versions and new programs are implemented and revised; they are also in support of the SCADA/ (supervisory control and data acquisition) system for process monitoring and controlling.

6f) Other	\$1.3	\$3.2	\$2.4
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Professional services also include labor and industrial hygiene services. Collectively reported within the line item, "Other" are various services including succession planning,

FY 2024-25 and FY 2025-26 BUDGET EXPENSE – ADDITIONAL DETAIL
(In Millions)

	Projected	Proposed	Proposed
	<u>2023-24</u>	<u>2024-25</u>	<u>2025-26</u>

pre-employment testing, actuarial services, performance management consultant, local sewer service fee rate study, specialized onsite training, strategic outsourcing, development of lock-out – tag-out procedures, stratus environmental audits and studies, groundwater extraction, OCHCA inspections, and grant applications, and an analysis of the business practices of the of maintenance support services.

7) OTHER OPERATING SUPPLIES	\$7.2	\$8.3	\$8.9
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7a) Property & General Liability Insurance	\$3.3	\$3.6	\$4.0
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OC San’s outside excess general liability insurance coverage is \$40 million with a self-insurance retention of \$750,000. OC San’s property insurance coverage of \$1 billion for perils other than flood and earthquake, \$25 million for flood, and \$25 million for earthquake is subject to self-insurance retentions of \$250,000 for all perils other than flood and earthquake, \$100,000 for flood, and 5% per structure with a minimum of \$5 million for earthquake.

The proposed appropriation is needed to fund insurance premiums, claims, and maintain the recommended level of reserve within the general liability and property self-insurance fund.

7b) Regulatory Operating Fees	\$1.6	\$1.8	\$1.9
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Payments to the Regional Water Quality Control Board for the National Pollution Discharge Elimination System (NPDES) Permit and to the South Coast Air Quality Management District for permit fees.

7c) Other Operating	\$0.7	\$0.8	\$0.8
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Other material, supplies, and services collectively reported within this line item.

7d) General Manager Contingency	\$1.5	\$1.8	\$1.9
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These funds are centrally budgeted and expended through the direct discretion and approval of the General Manager to support unanticipated OC San needs or requests of the Board.

7e) Prior year Appropriations	\$0.0	\$0.0	\$0.0
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Since the operating budget lapses at the end of each fiscal year, funds are needed to be set aside for contacts, purchases, commitments, and other legal obligations that have been incurred prior to June 30 in the prior year, but goods or services have not been delivered until after June 30 in the new budget year. (Projected FY 2019-20 budget reflects application of these funds.)

**FY 2024-25 and FY 2025-26 BUDGET EXPENSE – ADDITIONAL DETAIL
(In Millions)**

	<u>Projected 2023-24</u>	<u>Proposed 2024-25</u>	<u>Proposed 2025-26</u>
7f) Other Non-Operating	\$0.1	\$0.1	\$0.1

Other non-operating expenses and obsolete inventory are in this group of expenses.

8) ADMINISTRATIVE EXPENSE	\$1.6	\$2.7	\$2.7
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8a) Small Computer Items	\$0.8	\$1.3	\$1.3
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New Computers/Notebooks/Tablets, printers, monitors, networking equipment, computer peripherals, digital equipment, PDAs, digital cameras, etc.

8b) Memberships	\$0.6	\$0.7	\$0.7
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OC San's largest membership costs are for OC San-wide participation in groups such as the National Association of Clean Water, the National Water Research Institute, the Water Environment Research Foundation, the California Association of Sanitation Agencies, the Southern California Alliance of Publicly Owned Treatment Works, the Association of California Water Agencies, and the Center for Demographic Research. A minor portion of these expenses is for staff memberships in professional associations.

8c) Supplies, Postage & Publications	\$0.1	\$0.2	\$0.2
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Office supplies include such items as envelopes, letterhead, notebooks, calendars, etc.

8d) Other	\$0.1	\$0.5	\$0.5
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Other smaller administrative expenses collectively reported within this line item.

9) RESEARCH AND MONITORING	\$1.8	\$2.1	\$2.0
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9a) Environmental Monitoring	\$1.0	\$1.2	\$1.1
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The budget line item for "Environmental Monitoring" includes costs associated with OC San's NPDES permit-required ocean monitoring program.

In addition to the funds needed to conduct the permit-required ocean monitoring program, environmental monitoring also includes operating funds and insurance fees for OC San's ocean monitoring vessel, the M/V Nerissa.

9b) Air Quality Monitoring	\$0.2	\$0.3	\$0.3
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Periodic monitoring and analysis of air emissions requires testing from various sources including the central generation facilities, validation of emissions from continuous monitoring equipment, and source testing after CIP installation/modification (i.e., P1

FY 2024-25 and FY 2025-26 BUDGET EXPENSE – ADDITIONAL DETAIL
(In Millions)

	<u>Projected 2023-24</u>	<u>Proposed 2024-25</u>	<u>Proposed 2025-26</u>
trickling filters, P1 primary basin install and modifications, etc.). Periodically, there is a requirement to test the waste gas flares.			

9c) Other Research	\$0.6	\$0.6	\$0.6
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OC San contributes annually to research organizations such as the Southern California Coastal Water Research Project.

10) TRAINING AND MEETINGS	\$0.9	\$2.0	\$2.0
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10a) Training	\$0.8	\$1.8	\$1.8
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This category includes ongoing technical and safety training and materials for staff, required training for computerized plant monitoring, and control systems and training to allow for a more adaptive and flexible work force. Cost savings have been achieved in part through increased use of on-line training.

10b) Meetings	\$0.1	\$0.2	\$0.2
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The General Manager has reviewed all meeting request budgets for necessity, duplication, and redundancy and has limited this amount to a responsible level.

11) PRINTING AND PUBLISHING	\$0.3	\$0.4	\$0.4
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11a) In-House Publishing	\$0.2	\$0.2	\$0.2
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Although the budget provides for some outside reproduction, most OC San printing activities are completed In-house, reflecting an expanded management information system and administrative requirements, as well as continuing demand by the public and regulatory agencies for information. These activities including printing of OC San maps, brochures, Board reports and agenda items, budget materials, etc.

11b) Other	\$0.1	\$0.2	\$0.2
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Includes outside printing and publishing expenses and notices and ads.

12) COST ALLOCATION	(\$20.0)	(\$21.4)	(\$22.4)
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This represents direct and indirect labor, benefits, materials, and services charged to the Capital Improvement Program (CIP) where the related work was performed.

2024-25 and 2025-26 Budget Development - Expense Summary

(In Millions)

Description	2023-24 Budget	2023-24 Projected	2024-25 Proposed	% Change	2025-26 Proposed	% Change
Salaries, Wages & Benefits	\$ 115.7	\$ 113.6	\$ 122.8	8.1%	\$ 129.3	5.3%
Repairs & Maintenance	35.5	35.1	36.3	3.4%	35.7	-1.7%
Operating Materials & Supplies	30.5	30.8	31.2	1.3%	31.8	1.9%
Contractual Services	21.8	22.1	23.5	6.3%	24.1	2.6%
Utilities	12.3	16.1	16.1	0.0%	16.4	1.9%
Professional Services	7.6	5.4	7.9	46.3%	7.1	-10.1%
Other	12.8	11.8	15.5	31.4%	15.9	2.6%
Total Non-Salary	120.5	121.3	130.5	7.6%	131.0	0.4%
Total Before Allocation	236.2	234.9	253.3	7.8%	260.3	2.8%
Cost Allocation	(21.6)	(20.0)	(21.4)	7.1%	(22.4)	4.5%
Net Operating Requirements	\$ 214.6	\$ 214.9	\$ 231.9	8.0%	\$ 237.9	2.6%



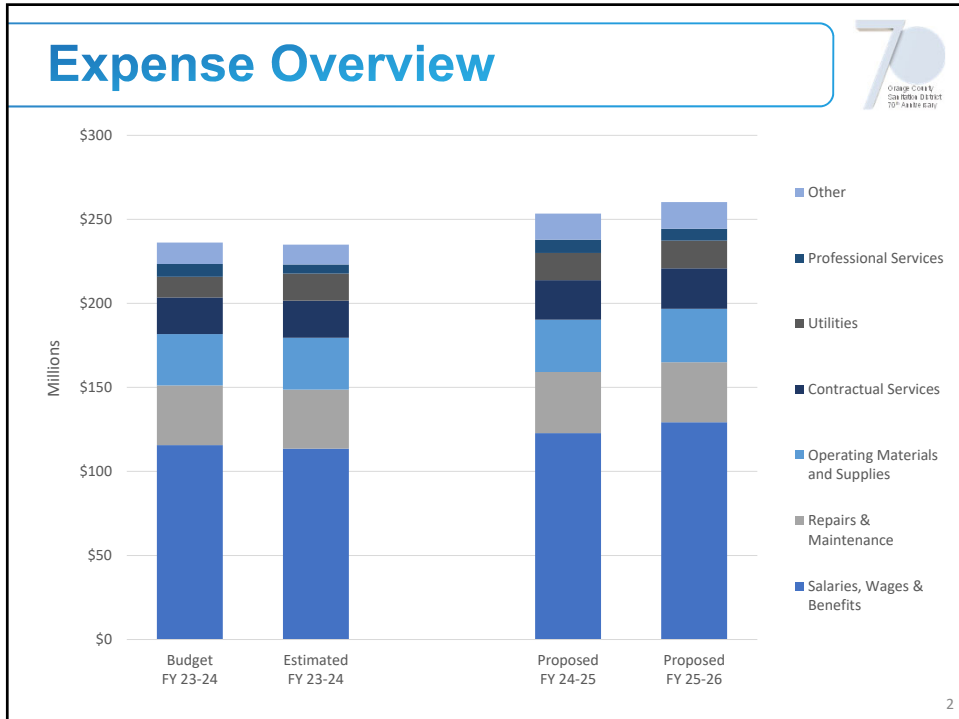
Orange County Sanitation District
70th Anniversary

FY 24-25 and FY 25-26 Operating Budget Expenditures

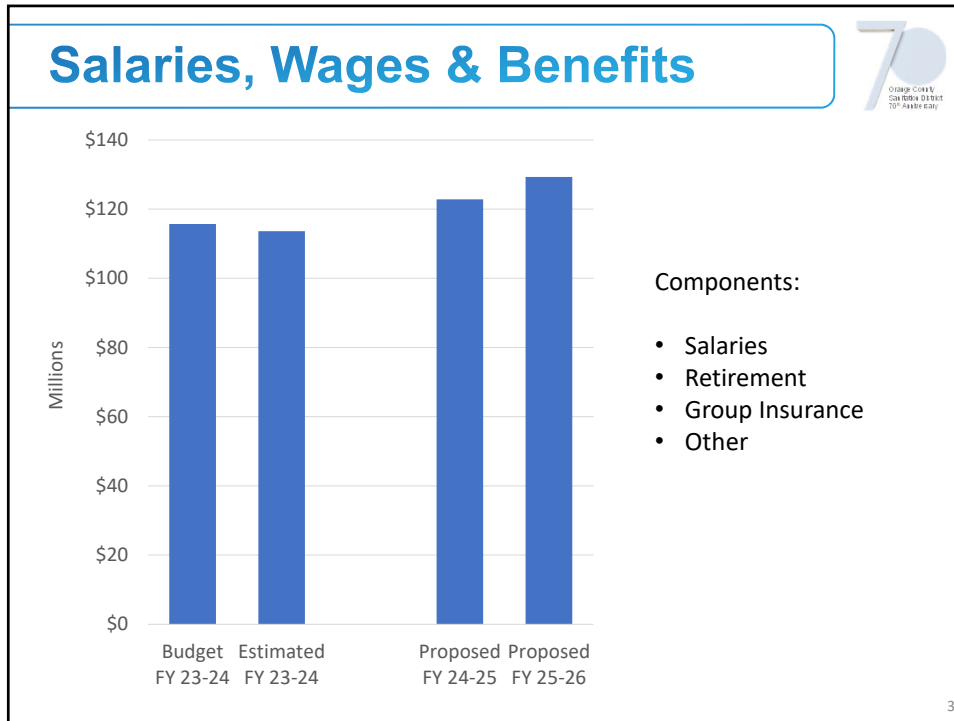
Presented by: Ruth Zintzun, Finance and Procurement Manager
Operations Committee

April 3, 2024

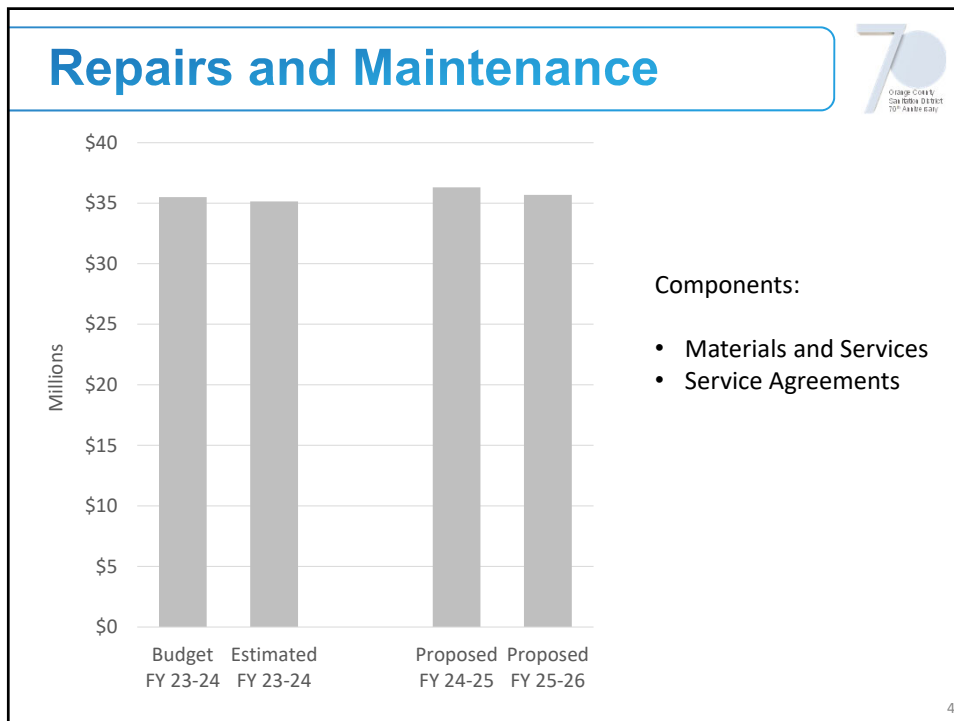
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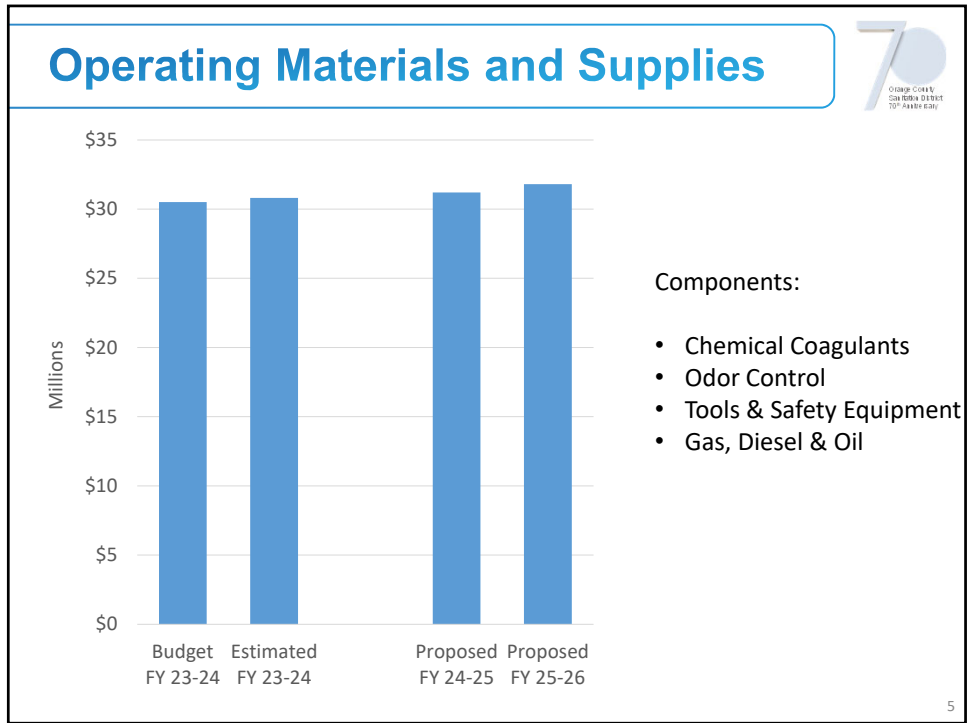
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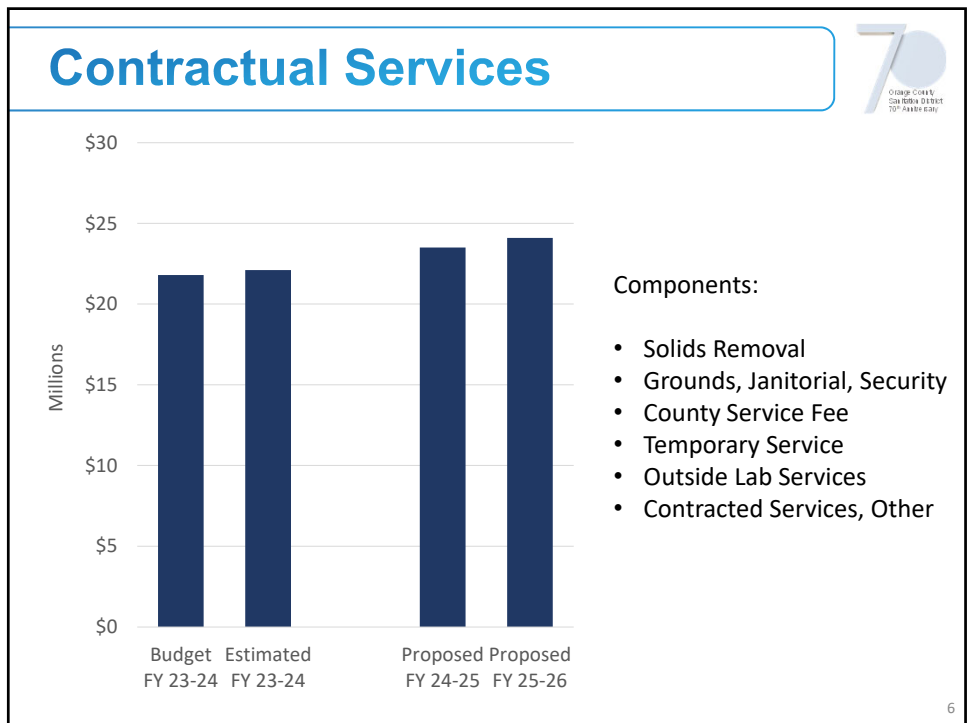
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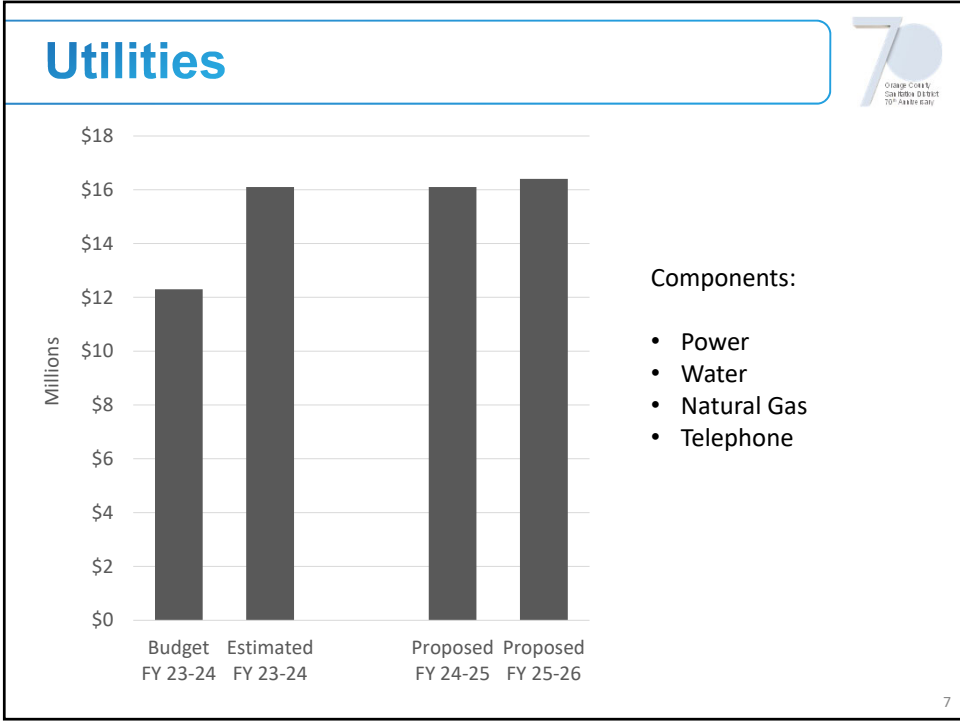
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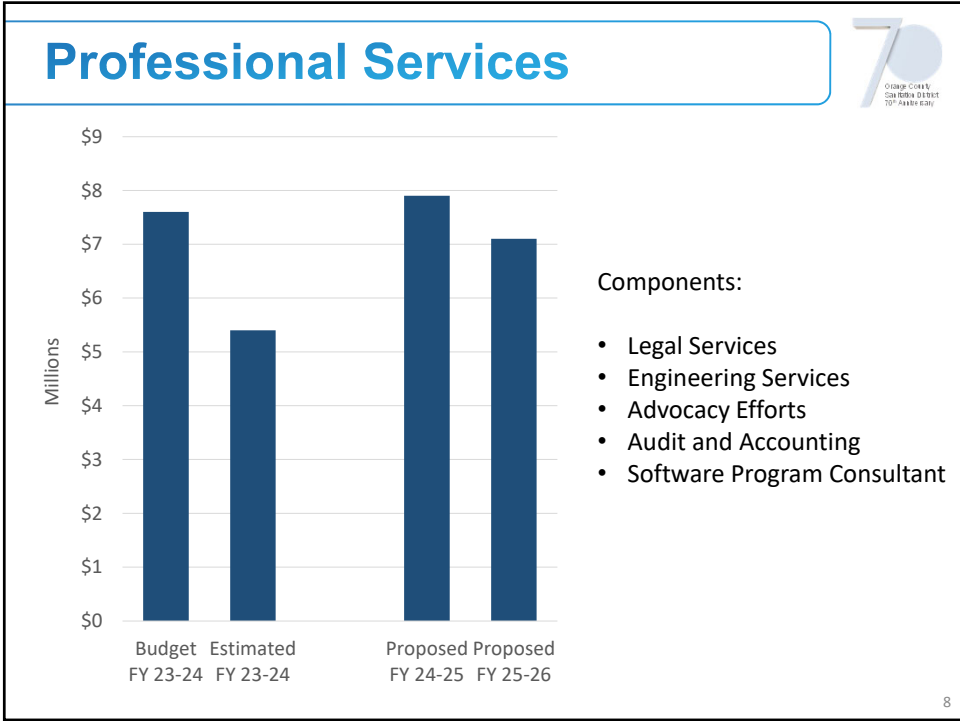
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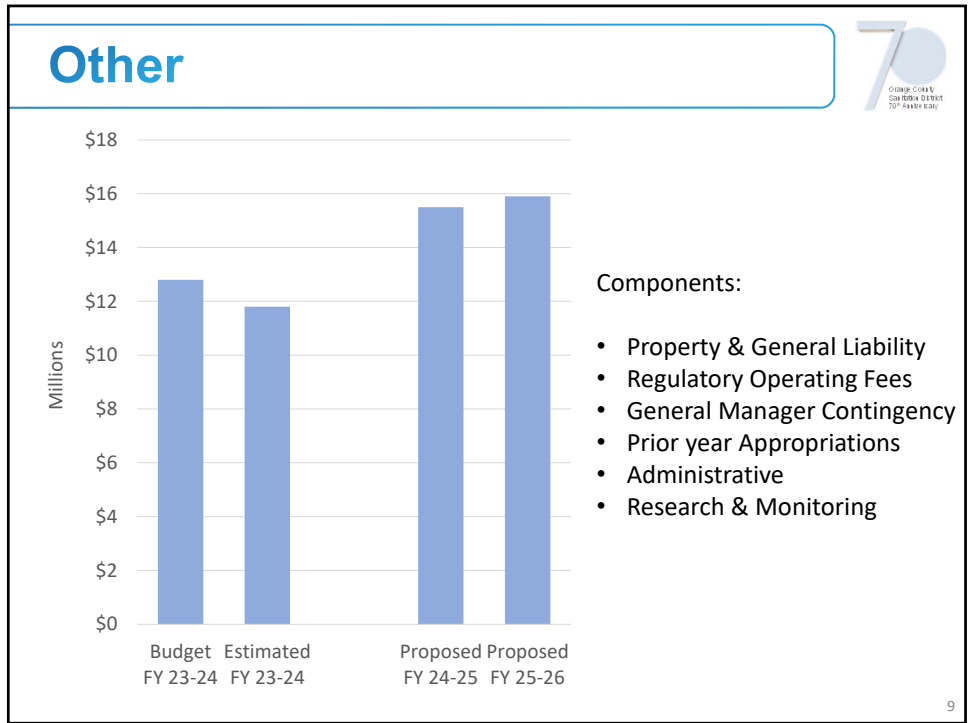
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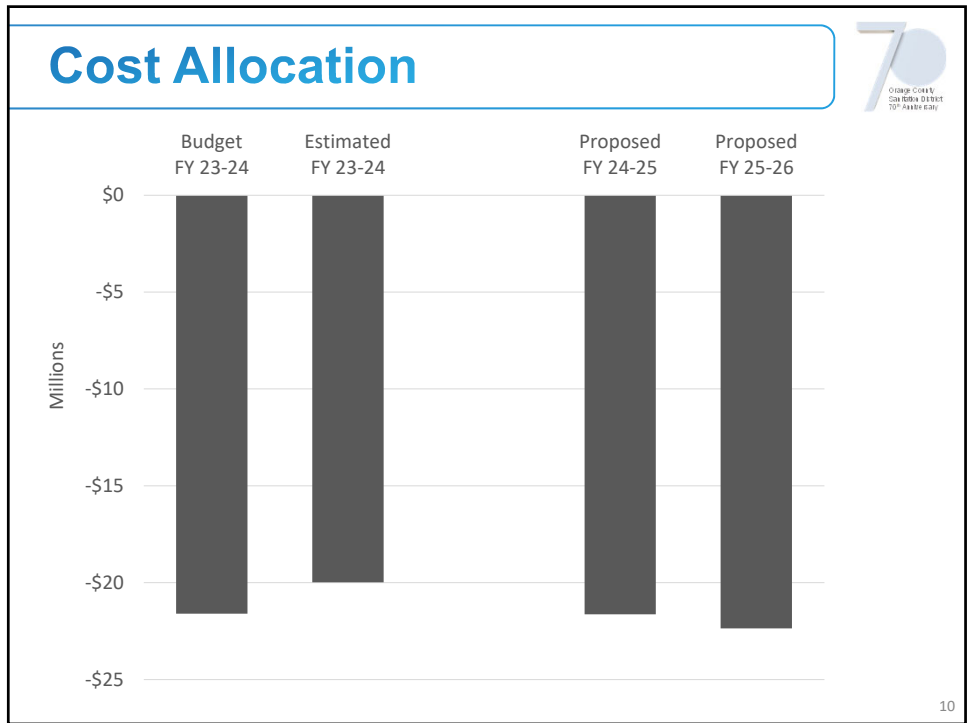
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Summary

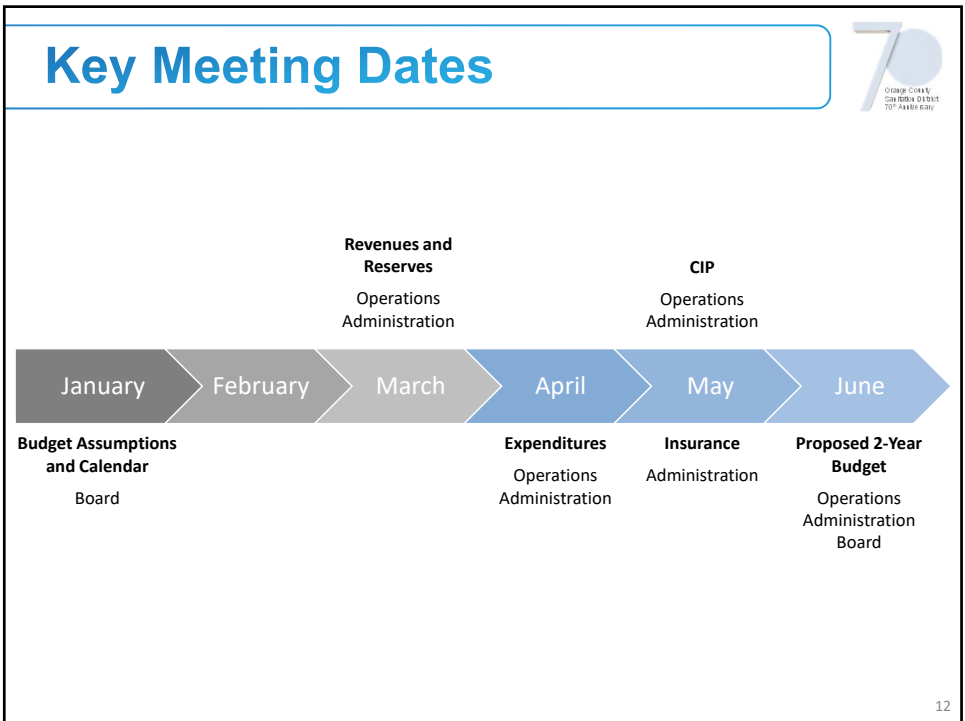


Operating Expenses (Millions)

	Budget FY 23-24	Estimated FY 23-34	Proposed FY 24-25	Proposed FY 25-26
Salaries, Wages and Benefits	\$115.7	\$113.6	\$122.8	\$129.3
Materials, Supplies and Services	120.5	121.3	130.5	131.0
Cost Allocation	(21.6)	(20.0)	(21.4)	(22.4)
Net Operating Expenses	\$214.6	\$214.9	\$231.9	\$237.9
<i>Change from Prior Budget</i>			\$17.3 8.0%	\$6.0 2.6%

11

11



12





OPERATIONS COMMITTEE

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

Agenda Report

File #: 2024-3535

Agenda Date: 4/3/2024

Agenda Item No: 7.

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

SUBJECT:

TPAD DIGESTER FACILITY AT PLANT NO. 2, PROJECT NO. P2-128

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION:

Information Item.

BACKGROUND

Sludge is a byproduct of wastewater treatment that requires further processing to reduce pathogens and volatile organic content so the remaining biosolids material can be beneficially reused in compliance with state and federal requirements. Orange County Sanitation District (OC San) uses anaerobic digesters at both Plants to stabilize sludge prior to dewatering. Anaerobic digesters are large, enclosed concrete structures that require pumping, mixing, heating, and gas handling systems. Anaerobic digesters also generate methane gas used to produce power and heat.

OC San has 18 digesters at Plant No. 2 that were built from 1959 through 1979. Completed in 2017, a comprehensive Biosolids Master Plan recommended upgrading the existing digester complex by adding Temperature Phased Anaerobic Digestion (TPAD) facilities.

TPAD Digester Facility at Plant No. 2, Project No. P2-128, is the first of four sequential projects planned to ultimately replace the entire digester complex as detailed in the Biosolids Master Plan.

Staff will present an update on the Project and decisions used to control costs and regulatory risks.

RELEVANT STANDARDS

- 24/7/365 treatment plant reliability
- Safe, beneficial reuse of Biosolids
- Use all practical and effective means for resource recovery
- Maintain and adhere to appropriate internal planning documents (Biosolids Master Plan and Strategic Plan)

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

TPAD Digester Facility at Plant No. 2, Project No. P2-128 Update

Presented by:
Mike Dorman, Director of Engineering

Operations Committee
April 3, 2024

1

Plant No. 2 Anaerobic Digesters

Raw Sludge → **Digesters (98° F)** → **Class B Biosolids**

Digester Gas

15+ Days

After Dewatering


18 Digesters

Project Drivers

- 46-65 years old
- Some are nearing end of useful life
- Seismic deficiencies cannot be cost effectively addressed (2015 Study)
- Liquefaction risks

2

Class A vs Class B Biosolids





Class B (OC San’s biosolids)

- Non-food crop direct land application (Arizona)
- Compost processing by vendor to achieve Class A

Class A


- Food crop direct land application (California, Arizona)
- Landscaping amendments





3

3

Biosolids Master Plan (2017)





Technology Evaluation

Base Product

Final Product

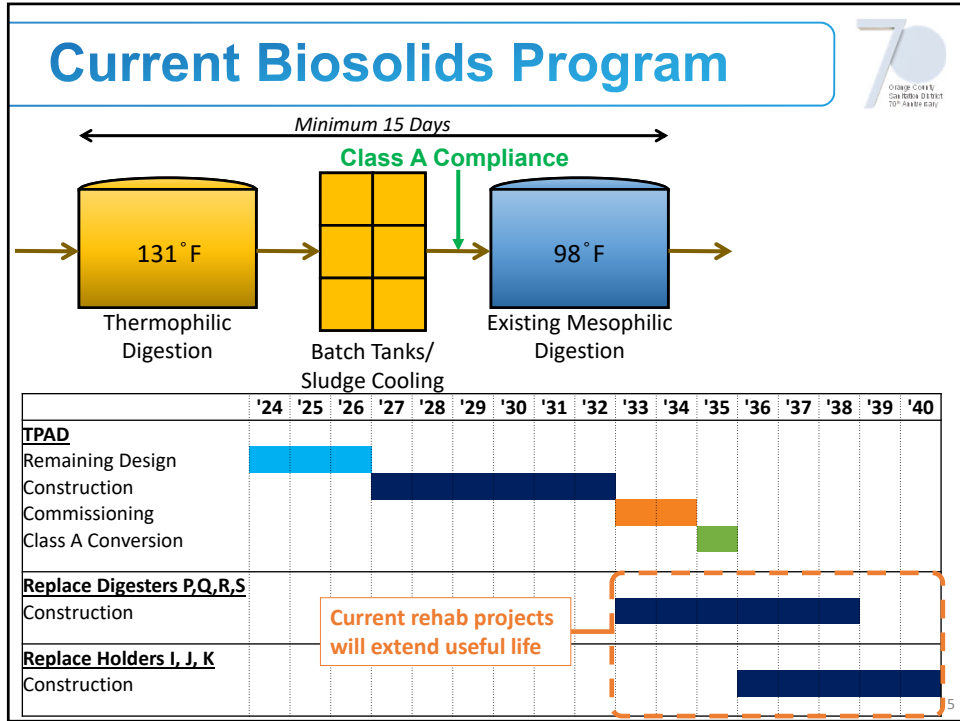
End Use

Little has changed with the Biosolids Market over the last 8 years except potential impact with PFAS and microplastics.

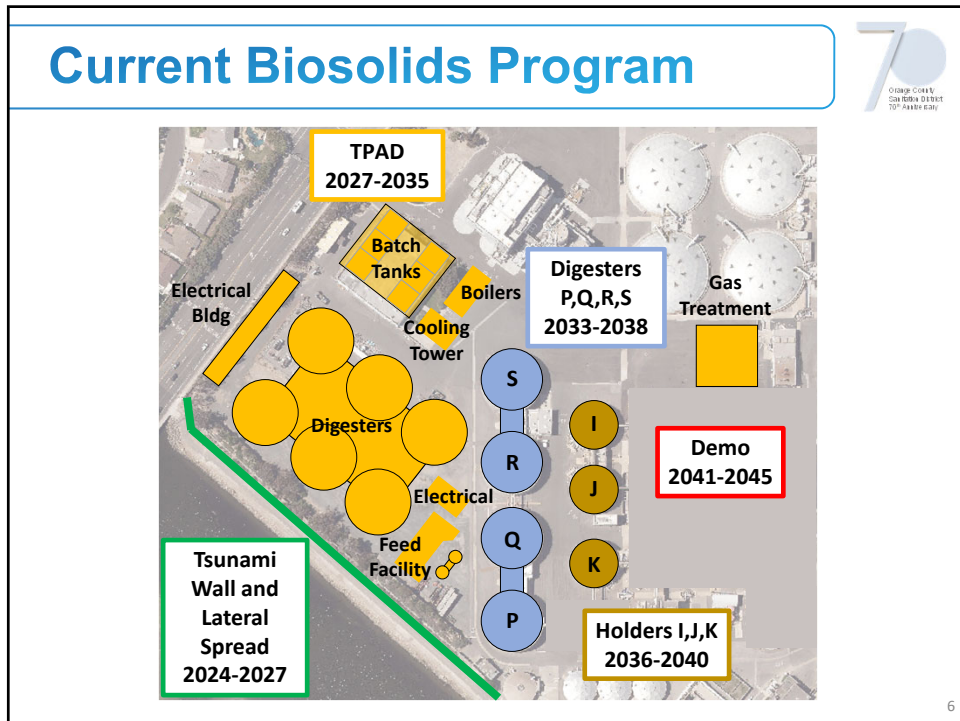
	Class B (Land Application)	Class A (Composting)	Class A (Land Application)
Current	40%	60%	0%
Future (TPAD)	7%	60%	33%

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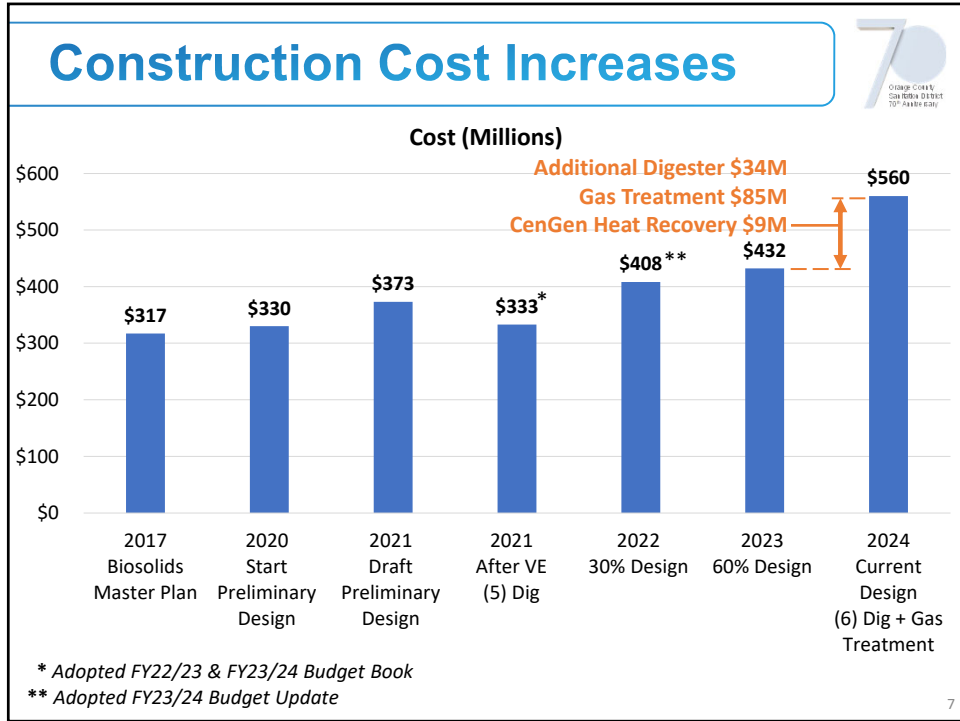
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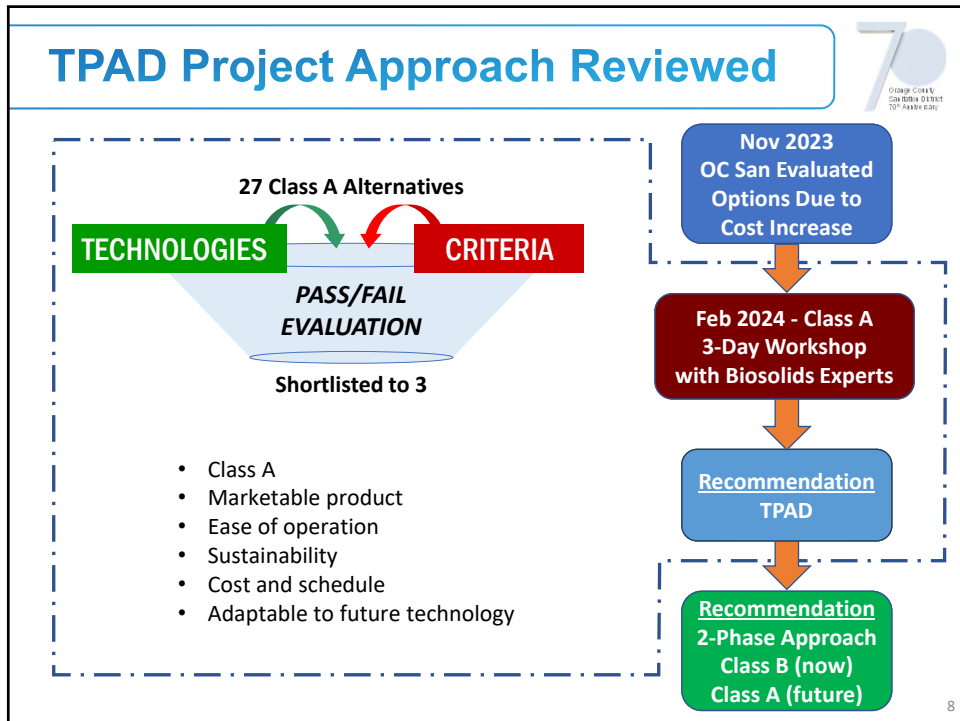
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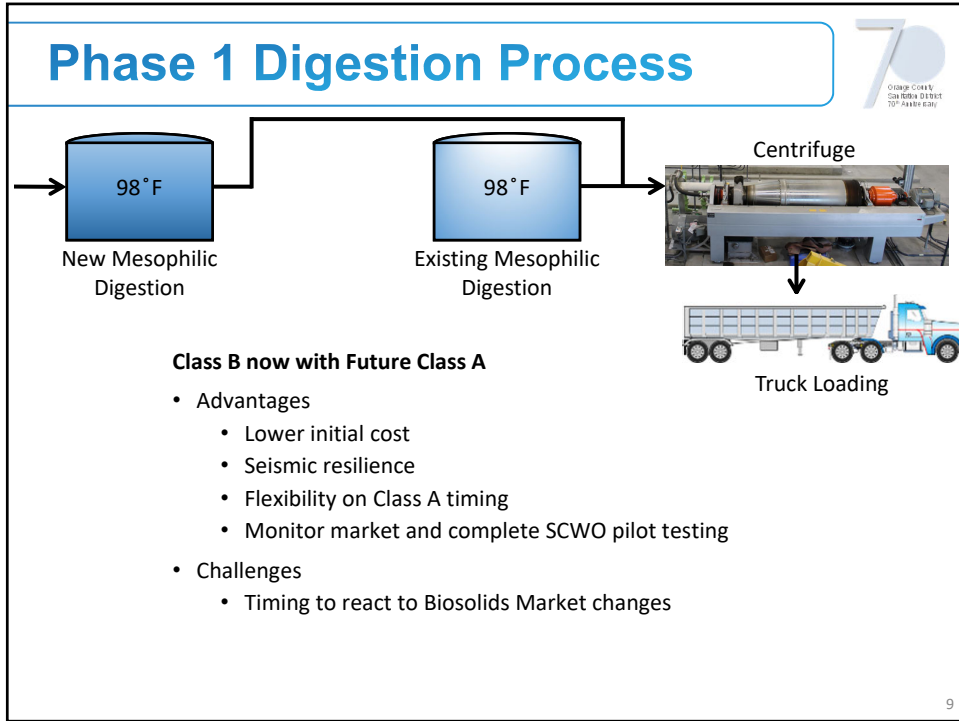
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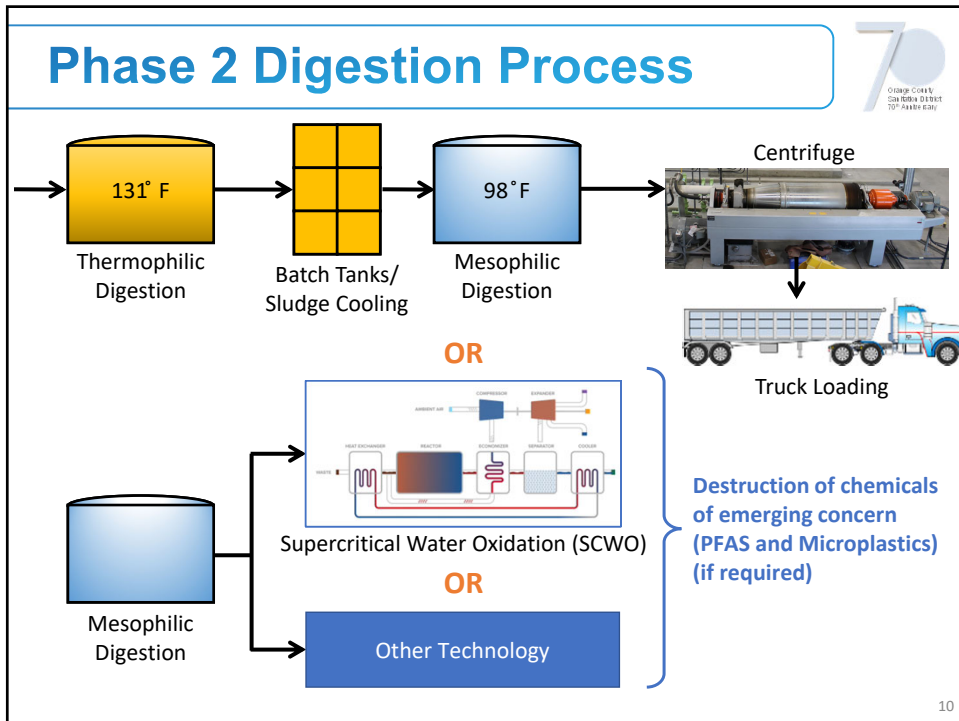
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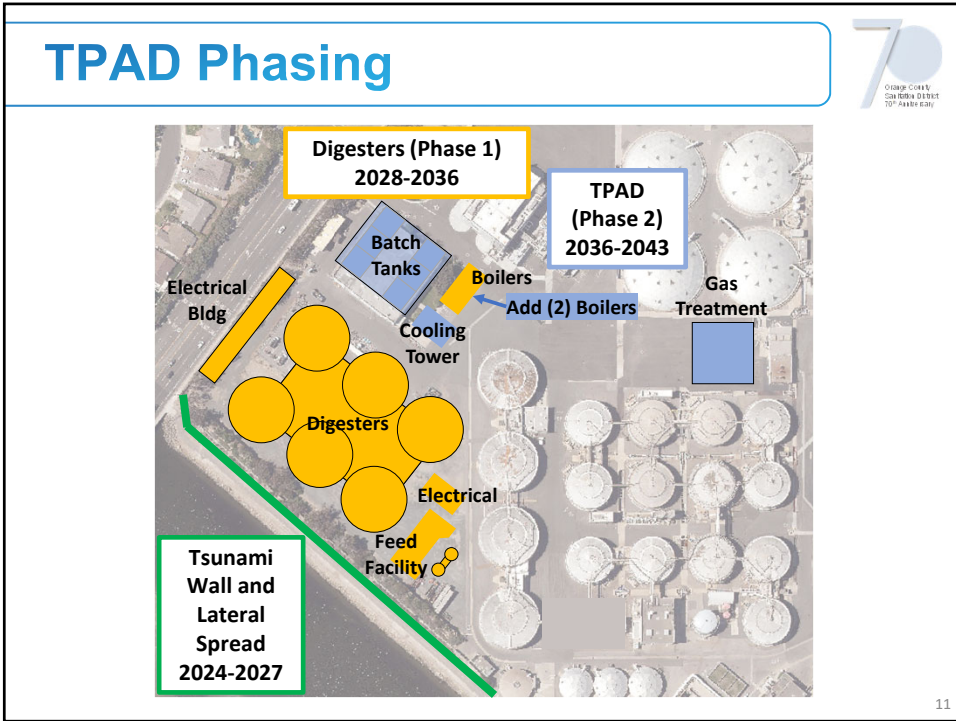
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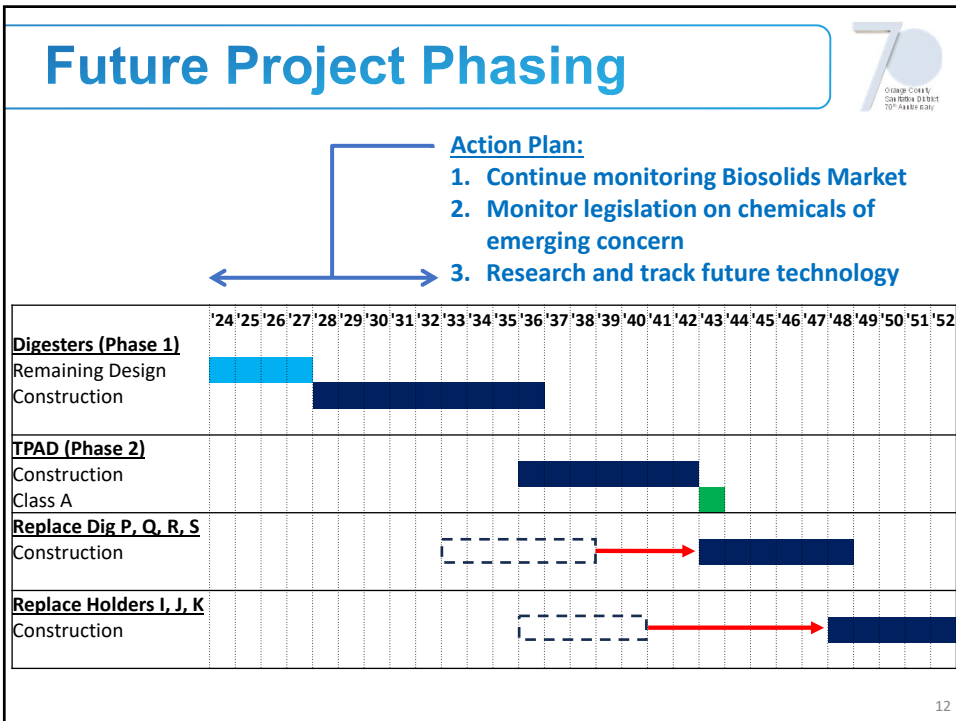
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Budget Overview



	TPAD Cost (\$M)	Meso Cost (\$M)
Design	\$57	\$55
Construction Staff	\$59	\$49
Construction Contractor	\$560	\$408
Contingency Contract	\$56	\$43
Total	\$732	\$555

No Budget Increase

13

13



14

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.

PERFLUOROCTANOIC ACID (PFOA) – An ingredient for several industrial applications including carpeting, upholstery, apparel, floor wax, textiles, sealants, food packaging, and cookware (Teflon).

PERFLUOROCTANESULFONIC 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.