

PROFESSIONAL DESIGN SERVICES AGREEMENT

THIS AGREEMENT, is made and entered into to be effective the 26th day of May, 2021 by and between the ORANGE COUNTY SANITATION DISTRICT, hereinafter referred to as "OC SAN", and MICHAEL BAKER INTERNATIONAL, INC., for purposes of this Agreement hereinafter referred to as "CONSULTANT".

WITNESSETH:

WHEREAS, OC SAN desires to engage CONSULTANT for **MacArthur Force Main Improvements, Project No. 7-68** to provide professional design engineering services to abandon the existing 12-inch force main and to construct two new force mains for redundancy and maintenance; and,

WHEREAS, CONSULTANT is qualified to provide the necessary services in connection with these requirements and has agreed to provide the necessary professional design engineering services; and,

WHEREAS, OC SAN has adopted procedures for the selection of professional design engineering services and has proceeded in accordance with said procedures to select CONSULTANT to perform this work; and,

WHEREAS, at its regular meeting on May 26, 2021 the Board of Directors, by Minute Order, accepted the recommendation of the Operations Committee pursuant to OC SAN's Purchasing Ordinance to approve this Agreement between OC SAN and CONSULTANT.

NOW, THEREFORE, in consideration of the promises and mutual benefits, which will result to the parties in carrying out the terms of this Agreement, it is mutually agreed as follows:

1. SCOPE OF WORK

CONSULTANT agrees to furnish the necessary professional and technical services to accomplish those project elements outlined in the Scope of Work attached hereto as Attachment "A", and by this reference made a part of this Agreement.

- A. CONSULTANT shall be responsible for the professional quality, technical accuracy, completeness, and coordination of all design, drawings, specifications, and other services furnished by CONSULTANT under this Agreement, including the work performed by its Subconsultants. Where approval by OC SAN is indicated, it is understood to be conceptual approval only and does not relieve CONSULTANT of responsibility for complying with all laws, codes, industry standards and liability for damages caused by errors, omissions, noncompliance with industry standards, and/or negligence on the part of CONSULTANT or its Subconsultants.
- B. CONSULTANT is responsible for the quality of work prepared under this Agreement and shall ensure that all work is performed in accordance with the standard of care generally accepted of like professionals performing similar services in the locality of the project ("Standard of Care"). CONSULTANT

shall respond to all comments, suggestions, and recommendations on OC SAN's review comment sheets (i.e., DS1, DS2 and DS3). All comments shall be incorporated into the design prior to the next submittal deadline or addressed, in writing, as to why the comment has not been incorporated. CONSULTANT shall ensure that each submittal is 100% accurate for the level of work submitted (i.e., correct references, terms, capitalization or equal status, spelling, punctuation, etc.).

- C. In the event that work is not performed to the satisfaction of OC SAN and does not conform to the requirements of this Agreement or any applicable industry standards, CONSULTANT shall, without additional compensation, promptly correct or revise any errors or deficiencies in its designs, drawings, specifications, or other services within the timeframe specified by OC SAN's Project Engineer/Project Manager. OC SAN may charge to CONSULTANT all costs, expenses and damages associated with any such corrections or revisions.
- D. All CAD drawings, figures, and other work shall be produced by CONSULTANT and Subconsultants using OC SAN's CAD Manual. Conversion of CAD work from any other non-standard CAD format to the OC SAN format shall not be acceptable in lieu of this requirement.

Electronic files shall conform to OC SAN's specifications. Any changes to these specifications by CONSULTANT are subject to review and acceptance by OC SAN.

Electronic files shall be subject to an acceptance period of 30 calendar days during which OC SAN shall perform appropriate reviews including CAD Manual compliance. CONSULTANT shall correct any discrepancies or errors detected and reported within the acceptance period at no additional cost to OC SAN.

- E. CONSULTANT shall ensure that all plans and specifications prepared or recommended under this Agreement allow for competitive bidding. CONSULTANT shall design such plans or specifications so that procurement of services, labor, or materials are not available from only one source, and shall not design plans and specifications around a single or specific product, piece of major equipment or machinery, a specific patented design or a proprietary process, unless required by principles of sound engineering practice and supported by a written justification that has been accepted in writing by OC SAN. CONSULTANT shall submit this written justification to OC SAN prior to beginning work on such plans and specifications. Whenever CONSULTANT recommends a specific product or equipment for competitive procurement, such recommendation shall include at least two brand names of products that are capable of meeting the functional requirements applicable to the project.
- F. All professional design engineering services performed by CONSULTANT, including but not limited to all drafts, data, correspondence, proposals, reports, and estimates compiled or composed by CONSULTANT, pursuant to this Agreement, are for the sole use of OC SAN, its agents and employees. Neither the documents nor their contents shall be released to any third party without the prior written consent of OC SAN. This provision does not apply to information

that (a) was publicly known, or otherwise known to CONSULTANT, at the time that it was disclosed to CONSULTANT by OC SAN, (b) subsequently becomes publicly known to CONSULTANT other than through disclosure by OC SAN, or (c) is required by legal order to be disclosed.

2. COMPENSATION

Total compensation shall be paid to CONSULTANT for services in accordance with the following provisions:

A. Total Compensation

Total compensation shall be in an amount not to exceed Five Hundred Thousand Dollars (\$500,000.00). Total compensation to CONSULTANT including burdened labor (salaries plus benefits), overhead, profit, direct costs, and its Subconsultant(s) fees and costs shall not exceed the sum set forth in Attachment "E" - Fee Proposal.

B. Labor

As a portion of the total compensation to be paid to CONSULTANT, OC SAN shall pay to CONSULTANT a sum equal to the burdened salaries (salaries plus benefits) actually paid by CONSULTANT charged on an hourly-rate basis to this project and paid to the personnel of CONSULTANT. Upon request of OC SAN, CONSULTANT shall provide OC SAN with certified payroll records of all employees' work that is charged to this project.

C. Overhead

As a portion of the total compensation to be paid to CONSULTANT, OC SAN shall compensate CONSULTANT and its Subconsultants for overhead at the rate equal to the percentage of burdened labor as specified in Attachment "E" - Fee Proposal.

D. Profit

Profit for CONSULTANT and its Subconsultants shall be a percentage of the professional design engineering services fees (Burdened Labor and Overhead). When the consulting or subconsulting services fee is \$250,000 or less, the maximum Profit shall be 10%. Between \$250,000 and \$2,500,000, the maximum Profit shall be limited by a straight declining percentage between 10% and 5%. For consulting or subconsulting services fees with a value greater than \$2,500,000, the maximum Profit shall be 5%. Addenda shall be governed by the same maximum Profit percentage after adding consulting services fees.

As a portion of the total compensation to be paid to CONSULTANT and its Subconsultants, OC SAN shall pay Profit for all services rendered by CONSULTANT and its Subconsultants for this project according to Attachment "E" - Fee Proposal.

E. Subconsultants

For any Subconsultant whose fees for services are greater than or equal to \$100,000 (excluding out-of-pocket costs), CONSULTANT shall pay to its Subconsultant total compensation in accordance with the Subconsultant amount specified in Attachment "E" - Fee Proposal.

For any Subconsultant whose fees for services are less than \$100,000, CONSULTANT may pay to its Subconsultant total compensation on an hourly-rate basis per Attachment "K" - Minor Subconsultant Hourly Rate Schedule and as specified in Attachment "A" - Scope of Work. OC SAN shall pay to CONSULTANT the actual costs of its Subconsultant fees and charges in an amount not to exceed the sum set forth in Attachment "E" - Fee Proposal.

F. Direct Costs

OC SAN shall pay to CONSULTANT and its Subconsultants the actual costs of permits and associated fees, travel, and licenses for an amount not to exceed the sum set forth in Attachment "E" - Fee Proposal. OC SAN shall also pay to the CONSULTANT actual costs for equipment rentals, leases, or purchases with prior written acceptance of OC SAN. Upon request, CONSULTANT shall provide to OC SAN receipts and other documentary records to support CONSULTANT's request for reimbursement of these amounts, see Attachment "D" - Allowable Direct Costs. All incidental expenses shall be included in overhead pursuant to Section 2 - COMPENSATION above.

G. Other Direct Costs

Other Direct Costs incurred by CONSULTANT and its subconsultant or subcontractor due to modifications in the Scope of Work resulting from field investigations and field work required by the Agreement. These items may include special equipment, test equipment and tooling, and other materials and services not previously identified. Refer to Attachment "D" - Allowable Direct Costs for payment information.

H. Reimbursable Direct Costs

OC SAN will reimburse CONSULTANT for reasonable travel and business expenses as described in this section and further described in Attachment "D" - Allowable Direct Costs. The reimbursement of the above-mentioned expenses will be based on an "accountable plan" as considered by the U.S. Internal Revenue Service (IRS). The plan includes a combination of reimbursements based upon receipts and a "per diem" component approved by the IRS. The most recent schedule of the per diem rates utilized by OC SAN can be found on the U.S. General Services Administration (GSA) website at <http://www.gsa.gov/portal/category/104711#>.

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

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

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

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

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

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

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

I. Limitation of Costs

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

3. REALLOCATION OF TOTAL COMPENSATION

OC SAN, by its Director of Engineering, shall have the right to approve a reallocation of the incremental amounts constituting the total compensation, provided that the total compensation is not increased.

4. PAYMENT

- A. Monthly Invoice: CONSULTANT shall include in its monthly invoice, a detailed breakdown of costs associated with the performance of any corrections or revisions of the work for that invoicing period. CONSULTANT shall allocate costs in the same manner as it would for payment requests as described in this section of the Agreement. CONSULTANT shall warrant and certify the accuracy of these costs and understand that submitted costs are subject to Section 11 - AUDIT PROVISIONS.
- B. CONSULTANT may submit monthly or periodic statements requesting payment for those items included in Section 2 - COMPENSATION hereof in the format as required by OC SAN. Such requests shall be based upon the amount and value of the work and services performed by CONSULTANT under this Agreement and shall be prepared by CONSULTANT and accompanied by such supporting data, including a detailed breakdown of all costs incurred and project element work performed during the period covered by the statement, as may be required by OC SAN.

Upon acceptance of such payment request by OC SAN, payment shall be made to CONSULTANT as soon as practicable of 100% of the invoiced amount on a per-project-element basis.

If OC SAN determines that the work under this Agreement or any specified project element hereunder, is incomplete and that the amount of payment is in excess of:

- i. The amount considered by OC SAN's Director of Engineering to be adequate for the protection of OC SAN; or
- ii. The percentage of the work accomplished for each project element.

He or she may, at his or her discretion, retain an amount equal to that which insures that the total amount paid to that date does not exceed the percentage of the completed work for each project element or the project in its entirety.

- C. CONSULTANT may submit periodic payment requests for each 30-day period of this Agreement for the Profit as set forth in Section 2 - COMPENSATION above. Said Profit payment request shall be proportionate to the work actually accomplished to date on a per-project-element basis. In the event OC SAN's Director of Engineering determines that no satisfactory progress has been made since the prior payment, or in the event of a delay in the work progress for any reason, OC SAN shall have the right to withhold any scheduled proportionate Profit payment.
- D. Upon satisfactory completion by CONSULTANT of the work called for under the terms of this Agreement, and upon acceptance of such work by OC SAN, CONSULTANT will be paid the unpaid balance of any money due for such work, including any retained percentages relating to this portion of the work.

- E. Upon satisfactory completion of the work performed hereunder and prior to final payment under this Agreement for such work, or prior settlement upon termination of this Agreement, and as a condition precedent thereto, CONSULTANT shall execute and deliver to OC SAN a release of all claims against OC SAN arising under or by virtue of this Agreement other than such claims, if any, as may be specifically exempted by CONSULTANT from the operation of the release in stated amounts to be set forth therein.
- F. Pursuant to the California False Claims Act (Government Code Sections 12650-12655), any CONSULTANT that knowingly submits a false claim to OC SAN for compensation under the terms of this Agreement may be held liable for treble damages and up to a \$10,000 civil penalty for each false claim submitted. This section shall also be binding on all Subconsultants.

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

5. CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS (DIR) REGISTRATION AND RECORD OF WAGES

- A. To the extent CONSULTANT's employees and/or its Subconsultants who will perform work during the design and preconstruction phases of a construction contract for which Prevailing Wage Determinations have been issued by the DIR and as more specifically defined under Labor Code Section 1720 et seq, CONSULTANT and its Subconsultants shall comply with the registration requirements of Labor Code Section 1725.5. Pursuant to Labor Code Section 1771.4, the work is subject to compliance monitoring and enforcement by the DIR.
- B. CONSULTANT and its Subconsultants shall maintain accurate payroll records and shall comply with all the provisions of Labor Code Section 1776, and shall submit payroll records to the Labor Commissioner pursuant to Labor Code Section 1771.4(a)(3). Penalties for non-compliance with the requirements of Section 1776 may be deducted from progress payments per Section 1776.
- C. Pursuant to Labor Code Section 1776, CONSULTANT and its Subconsultants shall furnish a copy of all certified payroll records to OC SAN and/or general public upon request, provided the public request is made through OC SAN, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement of the Department of Industrial Relations.

- D. CONSULTANT and its Subconsultants shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulation Section 16461(e).

6. DOCUMENT OWNERSHIP – SUBSEQUENT CHANGES TO PLANS AND SPECIFICATIONS

- A. Ownership of Documents for the Professional Design Engineering Services performed.

All documents, including but not limited to, original plans, studies, sketches, drawings, computer printouts and disk files, and specifications prepared in connection with or related to the Scope of Work or the Professional Design Engineering Services, shall be the property of OC SAN. OC SAN's ownership of these documents includes use of, reproduction, or reuse of and all incidental rights, whether or not the work for which they were prepared has been performed. The OC SAN ownership entitlement arises upon payment or any partial payment for work performed and includes ownership of any and all work product completed prior to that payment. This section shall apply whether CONSULTANT's Professional Design Engineering Services are terminated: a) by the completion of the Agreement, or b) in accordance with other provisions of this Agreement. Notwithstanding any other provision of this paragraph or Agreement, CONSULTANT shall have the right to make copies of all such plans, studies, sketches, drawings, computer printouts and disk files, and specifications.

- B. CONSULTANT shall not be responsible for damage caused by subsequent changes to or uses of the plans or specifications, where the subsequent changes or uses are not authorized or approved by CONSULTANT, provided that the service rendered by CONSULTANT was not a proximate cause of the damage.

7. INSURANCE

- A. General

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

B. General Liability

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

C. Umbrella Excess Liability

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

D. Automotive/Vehicle Liability Insurance

CONSULTANT shall maintain a policy of Automotive Liability Insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and other vehicles providing the following minimum limits of liability coverage: Combined single limit of One Million Dollars (\$1,000,000) or alternatively, Five Hundred Thousand Dollars (\$500,000) per person for bodily injury and Five Hundred Thousand Dollars (\$500,000) per accident for property damage. A statement on an insurance certificate will not be accepted in lieu of the actual additional insured endorsement.

E. Drone Liability Insurance

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

F. Workers' Compensation Insurance

CONSULTANT shall provide such Workers' Compensation Insurance as required by the Labor Code of the State of California in the amount of the statutory limit, including Employer's Liability Insurance with a minimum limit of One Million Dollars (\$1,000,000) per occurrence. Such Workers' Compensation Insurance

shall be endorsed to provide for a waiver of subrogation in favor of OC SAN. A statement on an insurance certificate will not be accepted in lieu of the actual endorsements unless the insurance carrier is State of California Insurance Fund and the identifier "SCIF" and endorsement numbers 2570 and 2065 are referenced on the certificate of insurance. If an exposure to Jones Act liability may exist, the insurance required herein shall include coverage for Jones Act claims.

G. Errors and Omissions/Professional Liability

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

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

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

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

H. Proof of Coverage

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

- Certificate of Insurance ACORD Form 25 (5/2010) or equivalent.
- Additional Insurance (General Liability) (ISO Form) CG2010 11 85 or
The combination of (ISO Forms) CG 2010 10 01 and CG 2037 10 01

All other Additional Insured endorsements must be submitted for acceptance by OC SAN, and OC SAN may reject alternatives that provide different or less coverage to OC SAN.
- Additional Insured (Auto Liability) Submit endorsement provided by carrier for OC SAN acceptance.
- Waiver of Subrogation State Compensation Insurance Fund Endorsement No. 2570 or equivalent.
- Cancellation Notice State Compensation Insurance Fund Endorsement No. 2065 or equivalent.

I. Cancellation Notice

Each insurance policy required herein shall be endorsed to state that coverage shall not be cancelled by either party, except after 30 days' prior written notice. The policy shall not terminate, nor shall it be cancelled, until 30 days after written notice is given to OC SAN except for nonpayment of premium, which shall require not less than 10 days written notice to OC SAN. Should there be changes in coverage or an increase in deductible or SIR amounts, CONSULTANT and its insurance broker/agent shall send to OC SAN a certified letter which includes a description of the changes in coverage and/or any increase in deductible or SIR amounts. The certified letter must be sent to the attention of OC SAN's Risk Management Division, and shall be received by OC SAN not less than 30 days prior to the effective date of the change(s) if the change would reduce coverage or increase deductibles or SIR amounts or otherwise reduce or limit the scope of insurance coverage provided to OC SAN.

J. Primary Insurance

The General and Automotive liability policies shall contain a Primary and Non Contributory Clause. Any other insurance maintained by OC SAN shall be excess and not contributing with the insurance provided by CONSULTANT.

K. Separation of Insured

The General and Automotive liability policies shall contain a "Separation of Insureds" clause.

L. Non-Limiting (if applicable)

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

M. Deductibles and Self-Insured Retentions

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

N. Defense Costs

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

O. Subconsultants

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

P. Limits Are Minimums

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

8. SCOPE CHANGES

In the event of a change in the Scope of Work, requested by OC SAN, the parties hereto shall execute an amendment to this Agreement setting forth with particularity all terms of the new Agreement, including but not limited to any additional CONSULTANT fees.

There shall be no substitution of the listed Subconsultants and the CONSULTANT's project team members without prior written acceptance by OC SAN.

9. ENGINEERING REGISTRATION

CONSULTANT's personnel are comprised of registered engineers and a staff of specialists and draftsmen in each department. CONSULTANT itself is not a registered engineer but represents and agrees that wherever in the performance of this Agreement requires the services of a registered engineer, such services hereunder will be performed under the direct supervision of registered engineers.

10. AUDIT PROVISIONS

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

11. LEGAL RELATIONSHIP BETWEEN PARTIES

The legal relationship between the parties hereto is that of an independent contractor and nothing herein shall be deemed to make CONSULTANT an employee of OC SAN.

12. NOTICES

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

Notices shall be mailed to OC SAN at:

ORANGE COUNTY SANITATION DISTRICT
10844 Ellis Avenue, Fountain Valley, CA 92708-7018
Attention: Larry Roberson, Senior Contracts Administrator
Copy: Hardat Khublall, Project Manager

Notices shall be mailed to CONSULTANT at:

MICHAEL BAKER INTERNATIONAL, INC.
5 Hutton Center Drive, Santa Ana, CA 92707
Attention: Jonis Smith, Vice President, Water Practice Executive
Copy: John Nagle, Project Manager

All communication regarding the Scope of Work, will be addressed to the Project Manager. Direction from other OC SAN staff must be approved in writing by OC SAN's Project Manager prior to action by CONSULTANT.

13. TERMINATION

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

CONSULTANT shall be permitted to terminate this Agreement upon thirty 30 days written notice only if CONSULTANT is not compensated for billed amounts in accordance with the provisions of this Agreement, when the same are due.

Notice of termination shall be mailed to OC SAN and/or CONSULTANT in accordance with Section 13 - NOTICES.

14. DOCUMENTS AND STUDY MATERIALS

The documents and study materials for this project shall become the property of OC SAN upon the termination or completion of the work. CONSULTANT agrees to furnish to OC SAN copies of all memoranda, correspondence, computation and study materials in its files pertaining to the work described in this Agreement, which is requested in writing by OC SAN.

15. COMPLIANCE

A. Labor

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

B. Air Pollution

CONSULTANT and its Subconsultants and Subcontractors shall comply with all applicable federal, state, and local air pollution control laws and regulations.

16. AGREEMENT EXECUTION AUTHORIZATION

Both OC SAN and CONSULTANT do covenant that each individual executing this document by and on behalf of each party is a person duly authorized to execute agreements for that party.

17. DISPUTE RESOLUTION

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

18. ATTORNEY'S FEES, COSTS AND NECESSARY DISBURSEMENTS

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

19. PROGRESS REPORTS

Monthly progress reports shall be submitted for review by the 10th day of the following month and must include as a minimum: 1) current activities, 2) future activities, 3) potential items that are not included in the Scope of Work, 4) concerns and possible delays, 5) percentage of completion, and 6) budget status.

20. WARRANTY

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

21. INDEMNIFICATION

To the fullest extent permitted by law, CONSULTANT shall indemnify, protect and hold harmless OC SAN and all of OC SAN's officers, directors, employees, CONSULTANT's, and agents (collectively the "Indemnified Parties"), from and against any and all claims, damages, liabilities, causes of action, suits, arbitration awards, losses, judgments, fines, penalties, costs and expenses (including, without limitation, reasonable attorneys' fees, disbursements and court costs, and all other professional, expert or CONSULTANT's fees and costs and OC SAN's general and administrative expenses; individually, a

“Claim”; collectively, “Claims”) which may arise from or are in any manner related, directly or indirectly, to any work performed, or any operations, activities, or services provided by CONSULTANT in carrying out its obligations under this Agreement to the extent of the negligent, recklessness and/or willful misconduct of CONSULTANT, its principals, officers, agents, employees, CONSULTANT’s suppliers, Subconsultants, Subcontractors, and/or anyone employed directly or indirectly by any of them. Notwithstanding the foregoing, nothing herein shall be construed to require CONSULTANT to indemnify the Indemnified Parties from any Claim arising solely from:

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

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

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

22. DUTY TO DEFEND

Payment to CONSULTANT by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition precedent to enforcing such Indemnified Party’s rights to indemnification hereunder. In the event a final judgment, arbitration, award, order, settlement, or other final resolution expressly determines that the claim did not arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of CONSULTANT, to any extent, then OC SAN will reimburse CONSULTANT for any defense costs paid by CONSULTANT to the Indemnified Parties.

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

23. CONSULTANT PERFORMANCE

CONSULTANT's performance shall be evaluated by OC SAN. A copy of the evaluation shall be sent to CONSULTANT for comment. The evaluation, together with the comments, shall be retained by OC SAN and may be considered in future CONSULTANT selection processes.

24. COMPLIANCE WITH SANITATION DISTRICT POLICIES AND PROCEDURES

CONSULTANT shall comply with all OC SAN policies and procedures including the Contractor Safety Standards, as applicable, all of which may be amended from time to time.

25. FORCE MAJEURE

CONSULTANT shall not be liable for any failure to perform or any impairment to its performance to the extent such failure or impairment is caused by any act of God, fire, flood, natural catastrophe, labor dispute or strike or shortage, national or state emergency, epidemic or pandemic, insurrection, riot, act of terrorism, war, act of government, any action or inaction of OC SAN or a third-party engaged by it, and/or any other event, occurrence or circumstance beyond the reasonable control of CONSULTANT. The compensation due CONSULTANT and the schedule governing the timing for CONSULTANT's performance shall be equitably increased and extended, respectively, to address any such impacts to CONSULTANT's performance, upon approval of OC SAN.

26. LIMITATION OF LIABILITY

CONSULTANT's liability to OC SAN under this Agreement shall be limited to the proceeds of insurance carried by CONSULTANT under this Agreement, but only to the extent CONSULTANT actually purchases and maintains the insurance required under this Agreement.

27. COST ESTIMATE

CONSULTANT's opinion of probable construction costs provided for herein are to be made on the basis of professional experience and qualifications and represent CONSULTANT's reasonable judgment as an experienced and qualified professional generally familiar with the construction industry. However, since CONSULTANT has no control over the cost of labor, materials, equipment, or services furnished by others, or over any contractor's methods of determining prices, or over competitive bidding or market conditions, CONSULTANT cannot and does not guarantee that proposals, bids, or actual cost of construction will not vary from opinions of probable construction costs prepared by CONSULTANT. If OC SAN wishes greater assurance as to probable construction cost, OC SAN may employ an independent cost estimator.

28. CLOSEOUT

When OC SAN determines that all work authorized under the Agreement is fully complete and that OC SAN requires no further work from CONSULTANT, or the

Agreement is otherwise terminated or expires in accordance with the terms of the Agreement, OC SAN shall give CONSULTANT written notice that the Agreement will be closed out. CONSULTANT shall submit all outstanding billings, work submittals, deliverables, reports or similarly related documents as required under the Agreement within 30 days of receipt of notice of Agreement closeout.

Upon receipt of CONSULTANT's submittals, OC SAN shall commence a closeout audit of the Agreement and will either:

- i. Give CONSULTANT a final Agreement Acceptance: or
- ii. Advise CONSULTANT in writing of any outstanding item or items which must be furnished, completed, or corrected at CONSULTANT's cost.

CONSULTANT shall be required to provide adequate resources to fully support any administrative closeout efforts identified in this Agreement. Such support must be provided within the timeframe requested by OC SAN.

Notwithstanding the final Agreement Acceptance, CONSULTANT will not be relieved of its obligations hereunder, nor will CONSULTANT be relieved of its obligations to complete any portions of the work, the non-completion of which were not disclosed to OC SAN (regardless of whether such nondisclosures were fraudulent, negligent, or otherwise); and CONSULTANT shall remain obligated under all those provisions of the Agreement which expressly or by their nature extend beyond and survive final Agreement Acceptance.

Any failure by OC SAN to reject the work or to reject CONSULTANT's request for final Agreement Acceptance as set forth above shall not be deemed to be acceptance of the work by OC SAN for any purpose nor imply acceptance of, or agreement with, CONSULTANT's request for final Agreement Acceptance.

29. ENTIRE AGREEMENT

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

IN WITNESS WHEREOF, this Agreement has been executed in the name of OC SAN, by its officers thereunto duly authorized, and CONSULTANT as of the day and year first above written.

CONSULTANT: MICHAEL BAKER INTERNATIONAL, INC.

By _____
Date _____

Printed Name & Title

ORANGE COUNTY SANITATION DISTRICT

By _____
David John Shawver
Board Chairman
Date _____

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

By _____
Ruth Zintzun
Purchasing & Contracts Manager
Date _____

- Attachments: Attachment "A" – Scope of Work
Attachment "B" – Labor Hour Matrix
Attachment "C" – Not Attached
Attachment "D" – Allowable Direct Costs
Attachment "E" – Fee Proposal
Attachment "F" – Not Attached
Attachment "G" – Not Attached
Attachment "H" – Not Attached
Attachment "I" – Cost Matrix and Summary
Attachment "J" – Not Attached
Attachment "K" – Minor Subconsultant Hourly Rate Schedule
Attachment "L" – Contractor Safety Standards

LDR:ms

ATTACHMENT A

SCOPE OF WORK

MacArthur Pump Station Force Main Improvements
Project No. 7-68

(Revised 3/26/2021)

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1. PROJECT REQUIREMENTS

1.0 SUMMARY

1.0.1 PROFESSIONAL DESIGN ENGINEERING SERVICES

A. Provide professional design engineering services for the project described herein including the following:

1. Preliminary Design Report
2. Permitting assistance
3. Preparation of bid documents

1.0.2 PROFESSIONAL LICENSING REQUIREMENTS

A. All plans and specifications shall be prepared by a professional engineer licensed in the State of California of the associated discipline.

1.1 BACKGROUND

The existing MacArthur Pump Station and force main was built in the 1960s under Job No. 7-1-D. In 1989 the internal equipment was replaced under Job No. 7-11-3. The pump station is located in a commercial area south of the John Wayne Airport, in the City of Newport Beach. The pump station's current capacity is approximately 3.6 MGD. MacArthur Pump Station is a combination of an underground wet well and dry well with above grade electrical equipment. Access is available from MacArthur Boulevard; however, on-site parking is very limited. Flows into the pump station are conveyed from a 21-inch VCP pipe and two VFD operated pumps discharge flows to a single 12-inch ACP force main. The force main alignment is along MacArthur Boulevard, ultimately terminating at a 72-inch manhole located approximately 2,100 feet away in the intersection of Mac Arthur Boulevard and Birch Street. Flows are then conveyed through the Von Karman Trunk to the Main Street Pump Station and finally to Reclamation Plant No. 1.

1.2 GENERAL PROJECT DESCRIPTION

The primary goal for this project is to provide dual force mains for long lasting and dependable service. The existing 12-inch force main will be abandoned and two new force mains will be constructed for redundancy and maintenance. There were no capacity deficiencies identified for the force main. CCTV inspections are not available for review. The existing valve vault structure, located adjacent to the pump station, is not able to accommodate both force main pipelines. Additional bypass pumping connections are needed to facilitate pump station bypassing during maintenance or an emergency. A new valve vault capable of withstanding loading from maintenance vehicles is required for force main isolation valves and bypass pumping connections.

1.3 PROJECT EXECUTION PHASES

All SANITATION DISTRICT projects are divided into six phases. CONSULTANT shall provide engineering services for all Project Elements listed in this Scope of Work (SOW) for the following Phases:

- Phase 1 – Project Development (Not in this SOW)
- Phase 2 – Preliminary Design
- Phase 3 – Design
- Phase 4 – Construction (Not in this SOW)

Phase 5 – Commissioning (Not in this SOW)

Phase 6 – Close Out (Not in this SOW)

1.4 DESCRIPTION OF PROJECT ELEMENTS

Detailed descriptions of the Project Elements are presented below.

1.4.1 PROJECT ELEMENT 1 – NEW FORCE MAINS AND DISCHARGE STRUCTURES

- A. The existing force main will be replaced with two new force mains with a minimum 30-year life expectancy. The force mains will be located in public right-of-way and will discharge into one or two new structures at or near the intersection of MacArthur Boulevard and Birch Street.
- B. The MacArthur Pump Station existing discharge valve vault will be replaced with a new valve vault to accommodate isolation valves for the two new force mains and bypass pumping connections.
- C. The existing force main and structures between MacArthur Pump Station and Diversion Structure No. 83 (SUN0155-0220) will be demolished or abandoned.
- D. For the purpose of estimating the predesign and design phase levels of effort, the CONSULTANT shall make the following assumptions regarding this project element:
 - 1. The force main alignment will be located within the public right of way.
 - 2. The pipe material will be HDPE.
 - 3. A new discharge structure(s) will be provided to connect to the downstream gravity sewer. Ideally, these structures are outside of the intersection and located where it is safer for Operations & Maintenance (O&M) staff to stop their trucks, set up traffic control and have direct access to the discharge structures.
 - 4. The new valve vault will be located within the SANITATION DISTRICT easement, out of traffic, with one new isolation valve and bypass connection per force main.

1.4.2 PROJECT ELEMENT 2 - TEMPORARY FACILITIES DURING CONSTRUCTION

- A. A bypass pumping system will be required for temporary handling of flows during construction. The temporary bypass pumping system must comply with the SANITATION DISTRICT's goal of zero sewage spills.

1.4.3 COORDINATION WITH OTHER PROJECTS

- A. The following projects may impact or require coordination with this project:
 - 1. City of Newport Beach Public Works Department, Birch Street Paving Improvements 2024-2025
 - 2. City of Newport Beach Public Works Department, MacArthur Blvd Paving Improvements 2026-2027

1.5 PROJECT SCHEDULE

1.5.1 GENERAL

- A. The table below lists the time frames associated with each major project deliverable and with the SANITATION DISTRICT's review and approval of those deliverables. CONSULTANT shall comply with the deadlines indicated in that table.
- B. The SANITATION DISTRICT's Project Manager will issue a Preliminary Design Notice to Proceed (NTP). The SANITATION DISTRICT's Project Manager (PM) will also issue a Final Design NTP upon the SANITATION DISTRICT's acceptance of the final Preliminary Design Report.

C. The time frames specified below are used to estimate the actual milestone dates based on the assumed NTP date, as shown in **Exhibit 8 - Project Schedule Calculation**.

D. The SANITATION DISTRICT will consider an alternative CONSULTANT-proposed schedule provided it is consistent with SANITATION DISTRICT resources and schedule constraints and adds value to the SANITATION DISTRICT.

PROJECT MILESTONE AND DEADLINES	
MILESTONE	DEADLINE
Kickoff Meeting	The kickoff meeting will be scheduled to coincide with the Preliminary Design NTP
Preliminary Design NTP	
Kickoff Meeting	The kickoff meeting will be scheduled to coincide with the Preliminary Design NTP
Submit draft Preliminary Design Report (PDR)	105 working days from receipt of Preliminary Design NTP. CONSULTANT shall establish a schedule with the SANITATION DISTRICT's PM for separately submitting working drafts of each design memo for SANITATION DISTRICT review prior to completing the draft PDR. This schedule shall factor in the logical sequence for completing the memos as well as both CONSULTANT and SANITATION DISTRICT resources
OCSD Review of Draft PDR	20 workdays from receipt of Draft PDR
Submit Final Preliminary Design Report	20 working days from receipt of SANITATION DISTRICT Comments on Draft PDR
Final Design NTP	SANITATION DISTRICT will issue Notice to Proceed with final design at a kickoff meeting following acceptance of the Final Preliminary Design Report
Submit Design Submittal 1 (DS1)	No submittal required
OCSD Review of DS1	N/A
Submit Design Submittal 2 (DS2)	50 workdays from NTP
OCSD Review of DS2	20 workdays from receipt of DS2
Submit Design Submittal 3 (DS3)	45 workdays from receipt of SANITATION DISTRICT comments on DS2
OCSD Review of DS3	20 workdays from receipt of DS3
Submit Final Design Submittal (FDS)	40 workdays from receipt of SANITATION DISTRICT comments on DS3. CONSULTANT shall stop work upon submission of DS3, except as required to participate in SANITATION DISTRICT meetings, until receipt of SANITATION DISTRICT comments on DS3
OCSD Review of FDS	20 workdays from receipt of FDS
Final Technical Specifications and Plans	20 workdays from receipt of SANITATION DISTRICT comments on FDS

2. PHASE 2 – PRELIMINARY DESIGN

The preliminary design phase will define the project. The final deliverable of this phase will be a Preliminary Design Report (PDR) with the basis of design for all elements of the project.

2.0 PRELIMINARY DESIGN EXECUTION

2.1 PREDESIGN EVALUATION STUDIES (NOT USED)

2.2 PRELIMINARY DESIGN PRODUCTION

2.2.1 GENERAL

A. Preliminary Design Report (PDR) production involves the preparation of design memos, drawings, calculations, and other supporting material resulting in the PDR.

2.2.2 DESIGN MEMOS

A. The CONSULTANT shall produce Design Memos as indicated below in accordance with **Exhibit 1 - Preliminary Design Report Requirements**. The CONSULTANT shall discuss the combining of design memos with the SANITATION DISTRICT and develop a design memo submittal list. Design memos have been consolidated into a total of nine (9) memos, as shown in Appendix D – Outline of Deliverables, and modified Exhibit 1 – Preliminary Design Report Requirements.

Process Design Configuration

- Design Configuration
- Redundancy
- Monitoring and Sampling
- Process Flow Diagrams
- Operating Philosophies
- Site and Facility Layouts
- Preliminary Load Criticality Ranking Table

Hydraulic Analysis

MacArthur Pump Station and Force Mains

- Hydraulic Analysis (hydraulic modeling is excluded from SOW)
- Hydraulic Profile

Demolition

- Describe Demolition Requirements
- Demolition List
- Demolition Plans
- Demo EID

Rehabilitation Requirements

Geotechnical Data Report

- Geotechnical Borings (3 Borings)
- Review of Existing Data - Preliminary Geotechnical Report
- Geotechnical Data Report and Recommendations

Civil Design Parameters

- General Civil
- Drainage Requirements
- Corrosion Protection Requirements

Utility Requirements

- Records Research and development of Utility Base Map
- Non-destructive utility locating investigations
- Potholing (anticipate 6 potholes during Preliminary Design)

Structural Design Parameters

Architectural Design Parameters

Note: Develop up to [three] alternative concepts for review and acceptance

- Process Mechanical Design Parameters**
- Building Mechanical Design Parameters**
- Fire Protection**

- Fire Protection Requirements
- Fire Water Flow Analysis
- Fire Protection Requirements for Existing Facilities
- Electrical**
 - Codes/standards. Brief description of electrical system. Electrical drawings.
 - Identify Electrical System Impacts
 - Report – Data Collection and Verification
 - Preliminary Load List
 - Preliminary Standby Power Requirements
 - ETAP – Preliminary Short Circuit Analysis and Load Flow/Voltage Drop Studies
 - ETAP – Provide Data. The SANITATION DISTRICT will perform ETAP studies.
 - Preliminary Analysis for cable pull calcs, ductbank cable derating, cable tray fill calcs.
 - Hazardous Area Classification Requirements
- Instrumentation and Control**
 - Instrumentation and Control System
 - Specialty Safety Systems
 - Preliminary SAT
 - PLC and RIO Panel Location Map
 - CCTV Coverage Map
- Landscaping**
 - Landscaping Requirements
 - Develop up to [three] alternative concepts for review and acceptance
- Plant Utility Investigation Findings**
- Vibration Analysis**

[Perform vibration analysis for the following equipment:

 1. Equipment 1
 2. Equipment 2
 3. Equipment 3]

[(See revised Engineering Design Guidelines Chapter 06, MECHANICAL DESIGN, Section 06.7 “Vibration Analysis for Rotating Electrical Equipment” located at the end of the SOW)
- Collections Basis of Design**
 - Codes and Standards
 - Hydraulic Analysis (hydraulic modeling is excluded from SOW) Pipeline Basis of Design
 - Manhole Basis of Design
 - Hydraulic Profiles for new gravity pipe connecting new force main to Birch Street Sewer)
- Collections Rehabilitation Alternatives**
 - Pipeline Rehabilitation
 - Manhole Rehabilitation
- Collections Pipeline Design**
 - Design Memo Items 1, 2, 3, etc.
 - Open cut vs. Trenchless Technologies
 - Trenchless Technologies at Major Closings
 - Provide 3 viable alignment options
- Collections Utility Investigation Findings**
- Collections Conceptual Traffic Control**
 - AHJ and Traffic Control Identification
 - Basis for Traffic Control Strategy
 - Traffic Analysis
 - Traffic Control Plans

- Design Safety Requirements**
 - Design Safety Requirements
 - Identify all potential project specific safety issues
 - Identify all potential Cal/OSHA and OCSD safety issues
 - Identify construction safety hazards
 - Use Sample Full Project Safety Review Plan to verify safety elements
 - Risk Management Check List to verify safety elements
 - HAZOP
- Public Impacts**
- Environmental and Regulatory Requirements**
 - CEQA Part of Programmatic EIR
 - CEQA work
 - Determine project environmental and regulatory requirements
 - Matrix of CEQA and Permit Requirements
 - Mitigation, Monitoring and Reporting List
- Permit Requirements**
 - List of Permits Required
 - Oil Well Abandonment
- Stormwater Requirements**
- Hazardous Material Survey, Mitigation and Control**
- Maintainability**
 - Define Maintainability Requirements
 - Maintainability Requirements Plan Drawings
 - Define Maintainability Rules
 - Define Maintainability Information for Project Specific Equipment
- Facility Operation and Maintenance**
 - Facility O&M Requirements
 - Operating Philosophies
 - Preliminary Assessment of O&M Staffing Requirements
- Implementation Plan**
 - Identification of Adjacent Projects
 - Preliminary Commissioning Checklist
 - Preliminary Construction Sequencing Plan
 - Review of Constructability Issues
 - Temporary Handling of Flow
- Construction Odor Monitoring and Mitigation**
- Preliminary Technical Specification List**

2.2.3 PRELIMINARY DESIGN DRAWINGS

A. The CONSULTANT shall produce the following Preliminary Design Report drawings in accordance with **Exhibit 1 - Preliminary Design Report Requirements**.

- General
- Demolition
- Civil
- Landscape
- Structural
- Architectural
- Mechanical
- Electrical

Instrumentation and Control

2.2.4 PRELIMINARY DESIGN REPORT (PDR) PRODUCTION, CONTENTS AND ORGANIZATION

- A. Preliminary Design Report (PDR) Production involves the preparation of design memos, drawings, calculations, and other supporting material resulting in the PDR.
- B. The CONSULTANT shall combine the materials described below into a draft PDR. The PDR shall be structured as outlined below, with the contents corresponding to the tasks listed in this SOW.

Preliminary Design Report Design Memos

Drawings (see Preliminary Design Drawings list below) Submittal Documentation

- List of Proposed Specifications Sections
- Calculations
- Product Data & Catalog Cuts
- Decision Log
- Meeting Minutes

- C. The Executive Summary shall summarize the conclusions of the Memos included in the report, and specifically include a summary construction schedule and construction cost estimate.
- D. The draft PDR and final PDR shall be submitted in searchable PDF format legible on-screen and as a hard copy. The labeling and organization of the PDF submittal shall be in accordance with **Exhibit 14 - Bluebeam Designer Training for Submission**.
- E. Each design memo shall be a separate file.
- F. The SANITATION DISTRICT's PM may request that the CONSULTANT submit an electronic proof set of the Draft PDR and Final PDR in order to initially confirm that the submittal is ready.

2.2.5 PRELIMINARY DESIGN COST ESTIMATE

- A. The CONSULTANT shall provide a cost estimate for the associated PDR submittal indicated below in accordance with **Exhibit 1 - Preliminary Design Report Requirements**.

2.3 PRELIMINARY DESIGN ACTIVITIES

The following services shall be provided by the CONSULTANT or an appropriately qualified subconsultant. In any case, the CONSULTANT shall be responsible for managing all subconsultants, including reviewing their work products prior to submission to the SANITATION DISTRICT.

2.3.1 EASEMENTS, PROPERTY BOUNDARIES AND WORK AREA LIMITS

- A. The CONSULTANT shall identify easement and property boundary requirements and prepare all easement documents, including performing any field investigations and survey required to identify and prepare easements.
- B. Unless otherwise directed, the CONSULTANT shall identify, survey, and show all property boundaries, and all existing and proposed easements, within and/or adjacent to the project boundaries.
- C. CONSULTANT shall show and explicitly identify the limits of work for all portions of the project, including any restrictions to the work allowed in any area, e.g., whether the area can be used for parking or laydown.
- D. All survey research and survey field work shall be performed by a Professional Land Surveyor licensed by the State of California.

2.3.2 TOPOGRAPHIC SURVEY

A. CONSULTANT shall conduct field and aerial surveys as required. Topographic information used on the construction plans shall be generated from a field survey and an aerial mapping process. The SANITATION DISTRICT will not provide the aerial survey information to the CONSULTANT for use on the project.

B. Prior to beginning design, CONSULTANT shall prepare the scope of work for field and aerial surveys required for all applicable Project Elements. CONSULTANT shall establish both vertical and horizontal control for the project. The field survey shall be used to establish both horizontal and vertical alignment of the facilities and shall note all survey monuments, topographic features, property lines, and elevations. The basis of bearings and benchmarks shall be indicated on the drawings. Control shall meet or exceed NGVD 88 requirements and shall be based on the Plant Local Coordinate System and datum. CONSULTANT's project schedule shall account for the above.

C. The aerial topography shall be required to meet the following criteria:

1. The final product shall be delivered in AutoCAD.
2. The CAD file shall adhere to the CAD Manual. The SANITATION DISTRICT shall be given the opportunity to review and comment on the compliance to the CAD Manual.
3. Site contours shall be in 1.0-foot intervals.
4. Contour and spot elevations shall be 3D; all other features shall be 2D.
5. CONSULTANT shall include the survey-related documents with the Design Support Documentation portion of the Design Submittals as specified in the Engineering Design Guidelines, Appendix A, Section A.3.19 "Project Support Documentation (PDS)".

D. Control Surveys for Collection Systems

1. General: Topographical information used on the construction plans shall be generated from an aerial mapping process. CONSULTANT shall provide for the aerial and field surveys necessary for the mapping process for all applicable Project Elements of the project SOW and shall provide for the aerial mapping. Providing for the process includes paying for, coordinating and designing the aerial and horizontal/vertical control surveying for the preliminary and final design. CONSULTANT's responsibilities for the surveys include generating any subconsultant scopes of work, data interpretation and preliminary design. All survey work is to be done under the direction and control of a Professional Land Surveyor, licensed by the State of California.
2. Aerial Survey: The aerial photography shall have sufficient coverage for the digital topographic mapping. The photo scale of the aerial photography shall not be more than 100 feet per inch for pipeline work or 20-feet per inch for pump stations. Stereo pairs of photographs shall be furnished to the SANITATION DISTRICT.
3. Phasing of Work: Other than the aerial and topographic survey work, the balance of the survey work shall not commence until the design phase of the project has been authorized or concurred to by the SANITATION DISTRICT.
4. Field Survey Aerial: A field survey shall be used to establish both horizontal and vertical control for the project. Control shall meet or exceed NGVD 88 requirements and shall be based on California State Plan Coordinates (NAD 83) including the 1995 O.C. surveyor's adjustments. A sufficient number of points shall be used to accurately complete the digital topographic modeling. No less than five control points per stereo model shall be used.
5. Aerial Field Survey Inclusions: The field survey shall include all survey monuments, topographic features, easements, property lines, culture, and elevations on the plan and profile sheets. All covers, including the existing sewer manholes, storm drain manholes, and utility and valve vaults shall be identified and marked in the field.

6. SANITATION DISTRICT Review Aerial Survey Line: The general location and alignment of the survey line shall be submitted to the SANITATION DISTRICT prior to performing the field survey. Survey work shall not commence until authorized or concurred to by the SANITATION DISTRICT. CONSULTANT shall be responsible for obtaining and paying for the field survey services.
7. Field Survey Base Line: The field survey shall establish a base line for construction purposes for pipeline work equal to or greater than 500-feet in length. The line will be used to define the proposed design, in terms of station and offset, and to establish the bearings for right-of-way. The survey line shall be set on 100-foot stations and shall be tied to the established aerial control. The field survey shall tie in all controlling monuments within the map limits and all street centerline intersections. The ties shall be express in both State Plane Coordinates and as station and offset.
8. Manhole Information: The field survey shall also include the measurement of the invert and manhole rim elevations of all existing sewers within the project reach. The size, orientation and invert of any pipe connections shall also be recorded.
9. Base Map: The base map index contours shall be spaced at 5 feet vertically and the immediate contours shall be spaced at one-foot contour intervals. The mapping shall include digital topographic mapping. The digital format shall be compatible with the SANITATION DISTRICT's Graphic Information System. All surface features, including those hidden from aerial view shall be incorporated into the digital mapping.
10. Plan and Profile Sheets: CONSULTANT shall prepare plan and profile sheets based upon the aerial mapping. The scale for plan and profile sheets shall be one inch equals forty feet (1" = 40') horizontal and one inch equals four feet (1" = 4') vertical. An aerial photographic (photo strip) with the alignment shall be included. The plan view shall be separate from the photo strip. Intersections shall be adequately detailed at a scale of one inch equals ten feet (1" = 10') or one inch equals twenty feet (1" = 20'). Manholes and other details shall be drawn at a scale that is adequate to provide clarity and sufficient detail for construction. The pump station construction drawings shall be drafted at scales of 1/8" = 1' to 1" = 20', as adequate, to allow for sufficient detail to be shown. The basis of bearings and benchmarks shall be indicated on the drawings,
11. Survey Note Submittal: CONSULTANT shall submit two bound copies of all survey notes and data used to establish vertical and horizontal control. The information submitted shall be suitable for use to establish construction controls. If additional property and/or right-of-way are required, CONSULTANT shall identify property and/or rights-of-way to be acquired. CONSULTANT shall prepare legal descriptions and plats for easements and property to be acquired during the final design phase of the project.

2.3.3 TRAFFIC CONTROL SERVICES

A. CONSULTANT shall secure the services of a Subconsultant to determine the traffic control requirements and prepare plans for all utility investigations including potholing, geophysical investigations and geotechnical investigations and assist corresponding subconsultants in obtaining approval from the City of Newport Beach.

2.3.4 GEOTECHNICAL INVESTIGATION

A. CONSULTANT shall secure the services of a qualified Geotechnical Engineering firm to prepare a Geotechnical Data Report that addresses geotechnical concerns for all applicable Project Elements of the project SOW.

B. Soil Explorations

1. The geotechnical services shall include exploratory work such as soil borings necessary to observe, test, classify soils, and monitor groundwater levels and potential groundwater pollutants of concern.

2. Three (3) geotechnical borings shall be conducted for the Project. The geotechnical shall review the data provided and revise the number and location of borings according to their professional's interpretation of needs and recommendation; however, a maximum of one thousand feet (1,000) shall be allowed between pipeline alignment borings along a pipeline alignment.

a. If unexpected or unique soils are encountered, an adequate number of borings shall be taken to try and define the limits of the anomaly. If it is determined that additional borings are required due to unexpected or unique soils, CONSULTANT shall notify SANITATION DISTRICT, and work will proceed upon written authorization from the SANITATION DISTRICT, based on a mutually agreed upon scope and budget.

3. Borings shall be taken at or near the upstream and downstream connection points for the proposed facility and approximately halfway along the proposed force main alignment.

4. The depth of the borings shall be adequate to characterize the soils to a depth of at least five feet below the bottom of an excavation or any proposed sewer invert elevation. At least two borings shall extend ten feet below the proposed excavation bottom or sewer invert.

C. Soil Sampling

1. Soil samples for testing shall be collected as needed based upon CONSULTANT's professional judgment. However, samples intervals shall not exceed two-foot depth intervals alternating SPT and RING samples in each boring. If borings are taken near existing sewers, samples shall be taken and delivered to the SANITATION DISTRICT for testing for coliforms to determine if sewers are leaking.

D. Soil Exploration Locations

1. The location of all soil explorations shall be plotted on a map and attached to the Geotechnical Report. Preferably, the explorations shall include survey coordinates consistent with the project survey. Complete logs of the soil profiles shall be included in the report.

2. Work conducted outside the SANITATION DISTRICT's treatment plant shall comply with the requirements of the local jurisdiction.

2.3.5 UTILITY INVESTIGATION

A. To better manage the risks associated with construction excavation, CONSULTANT shall perform a thorough search of all utilities impacted by the work for all applicable Project Elements of this SOW, regardless of size and all other facilities above or below ground. Utilities include all, utility company-owned and public agency-owned piping, duct banks, and other interferences. The search shall include utilities within the public right-of-way, and those located on private property and SANITATION DISTRICT property impacted by the proposed project. The search shall include the records and plans of the SANITATION DISTRICT and all respective public and private companies and utilities.

B. Review of SANITATION DISTRICT Records

1. The SANITATION DISTRICT's "As-built/Record" plans may be incomplete or inaccurate with respect to the routing of individual utilities, pipelines, etc. in the vicinity of the project. CONSULTANT shall check SANITATION DISTRICT records against those of the other agencies, companies, and utilities. These may include, but not be limited to, oil, gas, fuel, water, and sewer pipelines, traffic control facilities, telephone and electrical conduit and duct banks, storm drains, manholes, and other structures.

C. Review of Outside Agency Records

1. CONSULTANT shall contact, in writing, all jurisdictional agencies and utility owners to inform them of the SANITATION DISTRICT's project. CONSULTANT shall request plans showing all the agency's or utility's facilities, pipelines, etc. in the project area. CONSULTANT shall also request plans and schedules for all proposed construction in the project areas. CONSULTANT shall develop a schedule to minimize project conflicts and/or coordinate SANITATION DISTRICT projects with local agencies.
2. CONSULTANT shall personally visit each agency/company and search through all available plans, files, and documents. CONSULTANT shall meet with applicable field staff from each agency to confirm the completeness of their research. Abandoned utilities shall also be considered.
3. CONSULTANT shall document the contacts and information requested and received, including that from Underground Service Alert (USA). The SANITATION DISTRICT shall be copied on all correspondence between CONSULTANT and public and private agencies, and utility companies. CONSULTANT shall submit a copy of all documentation to the SANITATION DISTRICT with an itemized submittal letter. CONSULTANT's PM shall sign the transmittal cover letter and the cover letter shall confirm that CONSULTANT has sent a representative to each agency/company/utility, performed on-site inspections for each utility, and has listed the utilities.
4. CONSULTANT shall contact USA and request a Substructure listing for the project area.

D. On-Site Inspection

1. An on-site inspection shall be made in the project area. During the on-site inspection, a senior-level CONSULTANT representative shall walk the site accompanied by the SANITATION DISTRICT's Project Engineer (PE) and Supervising Inspector. The CONSULTANT representative shall be experienced in the location and identification of utilities in the field. During the on-site inspection, the CONSULTANT shall document all visible features that indicate utilities within the project area and compare them with the available utility plans.

E. Utilities for Adjacent Properties

1. CONSULTANT shall investigate all utilities serving properties adjacent to the work, and submit a spreadsheet at the end of the utility research accounting for all anticipated utilities for SANITATION DISTRICT review, with the following information:
 - a. List all utilities anticipated or each adjacent property.
 - b. Indicate whether or not each such utility was found on as-built drawings of any agency, with an identification of the agencies identifying such utility.
 - c. Indicate whether or not the utility was field located by utility through USA process, and, if so, by which agency.

F. CONSULTANT shall provide all required stamped traffic control plans as part of the encroachment application process required by all cities for use during the geophysical investigations, potholing, geotechnical borings, and field investigations.

G. Subsurface Utility Investigations

1. Investigation of existing utilities shall be in accordance with the respective ASCE guidelines, except as amended by this SOW. A brief description of the ASCE guidelines defines the Quality Level of detail for researching subsurface utilities as follows:
 - a. **Quality Level D:** Information derived from existing records or oral recollections.
 - b. **Quality Level C:** Information obtained by surveying and plotting visible above-ground utility features and by using professional judgment in correlating this information to Quality Level D information.

c. **Quality Level B:** Information obtained through the application of appropriate surface geophysical methods to determine the existence and approximate position of subsurface utilities. Quality Level B data shall be reproducible by surface geophysics, such as ground penetrating radar, at any point of their depiction. This information is surveyed to applicable tolerances and reduced onto plan documents.

d. **Quality Level A:** Precise horizontal and vertical location of utilities obtained by the actual exposure (or verification of previously exposed subsurface and surveyed utilities) and subsequent measurement of subsurface utilities, usually at a specific point. Minimally intrusive excavation equipment is typically used to minimize the potential for utility damage. A precise horizontal and vertical location, as well as other utility attributes, is shown on the plan documents. Accuracy is typically set to 15-mm vertical and to applicable horizontal survey and mapping accuracy.

2. Refer to CI/ASCE 38-02, Standard Guidelines for Collection and Depiction of Existing Subsurface Utility Data for details.

3. CONSULTANT shall determine all utilities impacted by the work for all applicable Project Elements of this SOW. Utilities include utility company-owned, and public agency-owned piping, duct banks, and other interferences. All utilities encountered during the preliminary design shall be shown on the plans. Plans shall show concrete encasements and steel casings on existing utilities as well as abandoned facilities.

4. Subsurface investigation for all utilities in and around the work area shall be performed to Quality Level D and Quality Level C. All utilities shall be plotted both in plan and profile on a scaled drawing that can later be incorporated into scaled (1" = 40') plan drawings.

5. CONSULTANT shall submit, for acceptance by the SANITATION DISTRICT, recommendations on which utilities should be investigated to Quality Level A and where Quality Level B investigations should be performed. As part of the submittal, a Potholing Plan and Geophysical Investigation Plan shall be developed including proposed pothole locations and type of geophysical investigation.

6. Prior to the SANITATION DISTRICT's acceptance of the Potholing Plan/Geophysical Investigation Plan, a project field walk by the CONSULTANT PM, SANITATION DISTRICT PE, Supervising Inspector, and other designated SANITATION DISTRICT personnel shall be performed.

H. Potholes and Geophysical Investigation

1. CONSULTANT shall secure the services of a subcontractor to perform the pothole work and geophysical investigation (including ground-penetrating radar).

2. CONSULTANT shall "pothole" and perform geophysical investigation on all utilities described and shown in the accepted Potholing Plan/Geophysical Investigation Plan. CONSULTANT's staff shall be on-site during potholing to provide direction to potholing crew. SANITATION DISTRICT staff shall also be present during potholing. Field investigations include visiting the project work site and each utility to verify the location of all interferences.

3. CONSULTANT shall provide all the related work necessary, including, but not limited to:

- a. Documentation of information
- b. Notification of USA's "Dig Alert"
- c. Providing field survey
- d. Obtaining required permits
- e. Submission of traffic control plans

- f. Setting up traffic control
 - g. Soft dig potholing
 - h. Ground-penetrating radar
 - i. Excavating
 - j. Backfilling
 - k. Repairing pavement to local jurisdiction requirements
4. "Soft" excavation potholing methods such as vacuum extraction is preferred; however, excavation methods shall be chosen to adequately define the utility. Crosscut trenches may be preferred for defining some utility locations. Hydro-jetting soft dig should be avoided in sandy, wet, and contaminated soil conditions.
5. Potholing subcontractor shall measure and document the depth of pavement and of base material at each pothole, and every five feet along crosscut trenches.
6. Work conducted outside the SANITATION DISTRICT's treatment plant shall comply with the requirements of the local jurisdiction.
7. CONSULTANT shall provide a licensed land surveyor or hire a licensed survey subcontractor(s) to field-locate the actual horizontal and vertical location of the constructed potholes. Survey controls shall be set and coordinated with the survey controls used on previous construction drawings. City of Newport Beach and Orange County control points shall be checked; northing, easting and elevation data for each pothole shall be shown on the Contract Drawings; and physical tie-ins provided in order to easily re-establish pothole locations after construction. CONSULTANT shall supply and supervise survey work and subcontractors needed to perform the pothole work. Survey datum differences shall also be reconciled.
8. The results of potholing and geophysical efforts shall be summarized in a field findings report.
9. CONSULTANT shall backfill and repair potholes consistent with the requirements of the local jurisdiction. If CONSULTANT is unable to determine local jurisdiction requirements prior to the proposal, CONSULTANT shall assume the following requirements:
- a. The materials removed from the excavation may not be used for backfill, unless approved by the local jurisdiction. If approved, excavated material used to fill potholes shall be placed with a maximum lift thickness of four inches and mechanically compacted.
 - b. If not approved, the CONSULTANT shall be responsible for hauling off and disposing of excavated pothole material. In this case, excavation holes shall be filled with a cement slurry mix from the bottom up. The excavated materials shall be tested for hazardous materials and disposed of offsite accordingly. Testing shall be the minimum required for classifying the materials. The potholing samples shall be tested by a California Environmental Laboratory Accreditation Program (ELAP) certified laboratory to identify characteristics of hazardous waste. A substance shall be considered hazardous if it possesses properties of toxicity, ignitability, corrosivity and/or reactivity per California Code of Regulations Title 22, Section 66261. In addition, at Minimum, the laboratory testing shall include an on-site Organic Vapor Analyzer (OVA) test for potential hydrocarbon contaminants. Should the OVA reading be equal to or greater than 45 ppm, further laboratory Minimum testing shall be performed to include Benzene, Toluene, Ethyl Benzene, and Xylene (BTEX) test per EPA guideline 8020 and Total Hydrocarbons (TPH) tests per EPA guideline. should the OVA reading be equal to or greater than 45 ppm.

- c. AC pavement shall be replaced to full depth or the structural section (AC & Base) plus two inches with hot mix asphalt unless otherwise required by Newport Beach. Cold mix shall only be allowed when the patch will be replaced by the project and where approved by Newport Beach.
- d. Concrete pavement shall be replaced to full depth plus two inches with Portland cement unless otherwise required by Newport Beach.

I. Quantitative Assumptions

- 1. CONSULTANT's Fee Proposal shall include a cost for potholes and unit cost for additional potholes. The cost shall provide for a maximum of 10 potholes, six (6) during preliminary design and four (4) potholes during final design.
- 2. CONSULTANT's Fee Proposal shall include a cost for geophysical investigation. The cost shall provide for a minimum of 25,000 square feet during preliminary design (length of alignment x 10 ft width).

J. Relocation of Existing Utilities

- 1. Project work that requires other agencies to relocate existing utilities shall be coordinated during design by CONSULTANT.

2.3.6 PUBLIC RELATIONS

- A. The SANITATION DISTRICT shall conduct all public outreach activities required during preliminary and final design phases.

2.3.7 ENVIRONMENTAL DOCUMENTATION

- A. CONSULTANT services related to Environmental Documentation may span across Phase 2 – Preliminary Design and Phase 3 - Design. When such services are required, they shall be based on the requirements of Section III – Project Schedule and based on the following requirements. The CONSULTANT shall allocate the budgeted hours between the Environmental Documentation services in Phase 2 and Phase 3 based on when these services will be required.

B. CEQA Documentation Support

- 1. This project is covered under the Facilities Master Plan Programmatic Environmental Impact Report. A Notice of Determination (NOD) will be filed for the project after Board approval of the construction contract. The CONSULTANT is to incorporate applicable components of the MMRP into the design and specifications of the contract documents.

C. Review of Existing CEQA Documentation

- 1. The SANITATION DISTRICT has adopted the CEQA documentation in the course of various programs and projects. These CEQA documents may cover or impact the proposed work on this project.
 - a. CEQA Programmatic Environmental Impact Report for 2017 Facilities Master Plan
- 2. CONSULTANT shall identify features of the proposed Project Work as described in the Preliminary Design Report that would require revisions to these CEQA documents. CONSULTANT shall also recommend what further studies or CEQA work would be warranted by the changes.

D. Mitigation, Monitoring and Reporting Program Compliance

- 1. The SANITATION DISTRICT prepared a Mitigation, Monitoring, and Reporting Program (MMRP) for this project. CONSULTANT shall prepare the following material related to compliance with the MMRP:

a. An MMRP Design Compliance Table that lists the particular construction contract document General Requirement, technical specification, or drawing that addresses each MMRP requirement. **Exhibit 13** shows the template to be used to prepare the Design Compliance Table.

2. The CONSULTANT shall develop a checklist of all applicable construction-phase and post-construction phase monitoring and reporting requirements originating from the following:

E. The checklist shall include the following:

1. Applicable EIR Mitigation Measure numbers
2. Descriptions of Mitigation Measures
3. How Mitigation Measures will be included in Bid Documents
4. Frequency of monitoring during construction
5. Notes

F. See **Exhibit 13 - MMRP Log Template**.

G. CONSULTANT shall also provide the SANITATION DISTRICT a list of special equipment, specialty inspector qualifications, or sampling or testing firms that may be needed by the SANITATION DISTRICT for enforcement of the MMRL during construction. This information shall be included in narrative form attached to the MMRL.

2.3.8 PERMITTING ASSISTANCE

A. CONSULTANT services related to Permitting Assistance may span across Phase 2 – Preliminary Design and Phase 3 - Design. When such services are required, they will be based on the requirements of Section III – Project Schedule and the schedule constraints associated with each particular permit. The CONSULTANT shall allocate the budgeted hours between the Environmental Documentation services in Phase 2 and Phase 3 based on when these services will be required.

B. For all applicable Project Elements of this SOW, CONSULTANT shall provide Bid Documents that ensure that the facility features and the facility performance, and construction procedures comply with all conditions of existing permits and permits required to construct this project. Construction drawings, specifications and supplemental drawings shall be prepared, as necessary, in the format required to obtain all permits.

C. CONSULTANT shall assist the SANITATION DISTRICT in obtaining permits. This assistance shall include completing application forms provided by the SANITATION DISTRICT, preparing supporting documentation for the permit applications as required by the issuing agency, furnishing the required number of copies of all construction drawings and exhibits, and attending meetings with permitting agencies at the request of the SANITATION DISTRICT.

D. With the exception of construction contractor-furnished permits, SANITATION DISTRICT staff will execute all applications. All permit fees will be paid directly by the SANITATION DISTRICT and will not be part of CONSULTANT's fee.

E. CONSULTANT shall submit all supporting documentation in a timely fashion for all permits required for this project as described below.

F. Stormwater Permitting

1. CONSULTANT shall prepare the specification for Stormwater Pollution Control Plan using the SANITATION DISTRICT's respective master specification as a starting point.

2.3.9 PROJECT MANAGEMENT

A. CONSULTANT shall be responsible for managing CONSULTANT's project execution, schedule, budget, subconsultants, and coordination with other projects. The CONSULTANT

shall perform the project management requirements in accordance with **Exhibit 3 - Project Management Requirements** with the project specific options identified below.

B. Project Management Plan (PMP):

- Not required
- Required
 - PMP approval prior to beginning technical work on the project.

C. Project Logs

- Major Decision Log
- Project Decision Log
- Action Item Log
- Decision Issues Log
- Meeting Log
- Risk Management Log

D. Progress Report, Status of Cost Model

- Not required
- Required

E. Project Invoices

1. Estimating earned value, tasks shall be further broken down to subtasks of no more than **\$100,000**.
2. Costs for invoicing shall be grouped into the following work packages:

Work Package	Description	Tasks
3146	Preliminary Design	All Phase 2 tasks
3158	Environmental Documentation	Task 2
3250	CONSULTANT Services During Design	Tasks 3.6 through 3.12
3251	Design Submittal 1	Tasks 3.0 through 3.2, divided into effort by design submittal. FDS is charged against DS3.
3252	Design Submittal 2	
3253	Design Submittal 3	
3254	Bid Support Services	Task 3.3

2.3.10 RISK MANAGEMENT

A. When required below, CONSULTANT shall provide risk management in accordance with **Exhibit 4 - Risk Management Requirements** with the project specific options identified below.

B. Risk Management:

- Not required
- Required
 - Initial Risk Workshop
 - PDR Risk Management Workshop: **2** hours. held **4** weeks prior to draft PDR at (SANITATION DISTRICT)

2.3.11 QUALITY CONTROL

A. The CONSULTANT shall provide quality control requirements in accordance with **Exhibit 6 - Quality Control Requirements**.

2.4 PDR WORKSHOPS AND MEETINGS

2.4.1 GENERAL

A. Workshop and meeting planning, requirements, agendas, and meeting minutes shall be in accordance with **Exhibit 5 - Workshop and Meeting Requirements**.

2.4.2 PDR PRODUCTION WORKSHOPS

A. Predesign Kickoff Workshop

1. A one -hour project kick-off meeting/virtual teams meeting shall be held with SANITATION DISTRICT staff to introduce principal members of the SANITATION DISTRICT and CONSULTANT's teams. The discussion topics shall include: SANITATION DISTRICT responsibilities, CONSULTANT's responsibilities, invoice procedures, personnel badges, parking, site access, CONSULTANT's SOW, detailed project schedule with milestones, Work Breakdown Structure requirements, and SANITATION DISTRICT confined space and other safety policy training.

B. Three PDR Production Workshops shall be held during Preliminary Design to review project progress during PDR Production. The subjects to be covered in each workshop are discussed below. Each workshop shall be **2** hours in length.

C. PDR Production Workshops shall be held during Preliminary Design to review the topics listed below. The list below also indicates the number of workshops to be held to cover the specific topic. Unless otherwise noted, each workshop shall be **2** hours in length.

PDR PRODUCTION WORKSHOPS	
TOPIC	NUMBER OF WORKSHOPS
PDR Kickoff	1
PDR Production Workshops:	2
Design Parameters	1
Geotechnical & Utility Investigations	1
Utility Investigations	4
Implementation Plan and Sequencing Constraints	1

2.4.3 PDR REVIEW WORKSHOPS

A. CONSULTANT shall hold the following workshops to review the draft Preliminary Design Report as required in **Exhibit 5 - Workshop and Meeting Requirements**:

1. Draft PDR Presentation Workshop
2. Draft PDR Review Workshop

2.4.4 PDR CONSTRUCTABILITY WORKSHOP

A. A constructability workshop shall be held after the draft PDR submittal review to identify any fatal flaws in the design relative to constructability. Some of the subjects that shall be covered in this workshop include the following; conflicts between design disciplines, geotechnical considerations, construction sequencing, permitting, and other local conditions and constraints.

B. This workshop shall be held at SANITATION DISTRICT facilities and shall generally be **2** hours in length. SANITATION DISTRICT and CONSULTANT staff shall attend this workshop.

C. CONSULTANT shall be responsible for completing the following tasks relative to the workshop:

1. Prepare package for constructability review workshop participants. The package shall consist of detailed plans and specifications and other information selected by CONSULTANT.
2. Prepare presentation on the project.
3. Summarize the constructability review workshop comments and action taken on each comment in a memorandum.
4. All comments and recommendations of the workshop shall be incorporated into Implementation Plan Design Memo and the Bid Documents.

2.4.5 TECHNICAL PROGRESS MEETINGS (DELETED FROM SOW)

2.4.6 FOCUSED MEETINGS

A. Focused meetings shall be held throughout preliminary design to discuss specific issues in detail and generate comments and direction from SANITATION DISTRICT staff. The following tentative list of topics may be covered in these meetings:

1. Permits

B. Meeting lengths shall be as required to cover the topic in question. Depending on subject matter and attendees, one meeting may cover multiple subjects. CONSULTANT shall determine how many meetings will be needed to cover these topics. CONSULTANT may suggest additional topics, as necessary. Supplementary meetings may be scheduled with SANITATION DISTRICT staff, as necessary to allow coordination between CONSULTANT and SANITATION DISTRICT staff.

3. PHASE 3 – DESIGN

3.0 BID DOCUMENTS

3.0.1 GENERAL

A. CONSULTANT shall provide engineering services to prepare biddable plans, technical specifications, and other Bid Documents as required based on the design concepts and criteria developed during Phase 2 - Preliminary Design. In this SOW, construction documents include specifications; drawings. Valve vault is proposed to be a precast concrete vault. Valve vault structural design is excluded from this SOW.

3.0.2 ENGINEERING DESIGN GUIDELINE UPDATES

A. All changes in the SANITATION DISTRICT's Engineering Standards, the SANITATION DISTRICT's Design Guidelines, and/or changes in design concepts and facility layouts as a result of SANITATION DISTRICT comments that may occur up to transmittal of SANITATION DISTRICT comments on Design Submittal 1 and 2, shall be incorporated into the Design by CONSULTANT with no increase in CONSULTANT's Not-to-Exceed upper limit on fees.

3.0.3 GENERAL REQUIREMENTS AND ADDITIONAL GENERAL REQUIREMENTS

A. The following are the minimum Additional GRs topics required for this project:

- Summary of Work
- Work Sequence
- Work Restrictions
- Permits
- Environmental Restrictions and Controls
- Measurement and Payment (includes Mobilization/Demobilization)

- Seismic Design Criteria (for those restraints, supports, etc. to be design by the Contractor)
- Shipping, Storage and Handling
- Project Control Management System (PMWeb construction management software)
- Equipment Service Manuals
- Equipment and Instrument Database (EID)
- Commissioning
- Training of OCSD Personnel
- Hazardous Materials Mitigation and Controls
- Mold Remediation and Controls

3.0.4 DESIGN SUBMITTALS

A. The CONSULTANT shall produce the following design submittals as indicated below in accordance with **Exhibit 2 - Design Requirements**. If a design submittal is eliminated, then the design submittal shall include the requirements associated with the required design submittal along with the requirements associated with the previous unchecked design submittals.

- Design Submittal 1
- Design Submittal 2
- Design Submittal 3
- Final Design Submittal

B. Continuing Work After Design Submittal Submission

CONSULTANT is expected to **continue design work** on the project while SANITATION DISTRICT staff reviews Design Submittal 1 and Design Submittal 2. For Design Submittal 3, CONSULTANT shall stop all design work until receipt of SANITATION DISTRICT comments on that submittal.

CONSULTANT is expected to **stop design work** on the project until SANITATION DISTRICT staff completes the review of each Design Submittal.

3.0.5 CONSTRUCTION SUBMITTAL ITEMS LIST

The SANITATION DISTRICT will develop the Construction Submittal Items List in accordance with **Exhibit 2 - Design Requirements**.

CONSULTANT shall develop the Construction Submittal Items List in accordance with **Exhibit 2 - Design Requirements**.

3.0.6 TEMPORARY FACILITIES DURING CONTRUCTION

Temporary facilities and bypass pumping are not required.

Temporary facilities and bypassing during construction are required, as described under the "Temporary Facilities During Construction" paragraph under the Project Elements and shall be described in words on the drawings and technical specifications.

Detailed plans and work sequence for temporary facilities and bypassing during construction, as described under the "Temporary Facilities During Construction" paragraph under the Project Elements. CONSULTANT shall provide a bypass layout and corresponding drawings and update Section 02999 Temporary Handling of Sewage Flows. Alternatives for pump station outage will also be required during the night or weekend to facilitate construction of the force mains.

3.1 DESIGN SUPPORT DOCUMENTATION

3.1.1 DESIGN SUBMITTAL SUPPORT DOCUMENTATION

A. The CONSULTANT shall provide a Design Submittal Support Documentation in accordance **Exhibit 2 - Design Requirements**.

B. Design Information

1. CONSULTANT shall include the following material with each Design Submittal:
 - a. CONSULTANT shall maintain the Project Logs specified under Phase 2 Project Management through Phase 3. Current copies of all logs shall be included with each Design Submittal.
 - b. Written response log to SANITATION DISTRICT comments on the previous submittal.
 - c. CEQA and Regulatory Compliance Matrix. This matrix shall list each applicable CEQA mitigation requirement and all known permit requirements with the corresponding description of how each requirement is to be satisfied. Measures to satisfy requirements might be in the GRs, Additional GRs, particular specification requirements, or actions taken separately from the construction contract.
 - d. Calculations
 - e. Draft or final Geotechnical Reports not submitted in the previous submittal and those revised since the previous submittal.
 - f. All memos that may have been prepared since the previous submittal was delivered.

C. Facility Operation and Maintenance

- Not required.
- Update operating philosophies
- Update estimates of Operations and Maintenance staffing requirements

D. Electrical Design Documentation

- Electrical design documentation not required.
- Updated Electrical Load Criticality Table
- Electrical Analysis Report
- Load list for all equipment
- Equipment sizing from three manufacturers for motor control centers, switchgear, transformers, and power panels
- Lighting calculations
- Standby generator sizing calculations
- Ductbank cable pulling tension, derating, and cable tray fill calculations

E. Power System Studies

- ETAP not required.
- Plant ETAP model for the project performed by the SANITATION DISTRICT.
- Plant ETAP model for the project performed by CONSULTANT.
- Electrical Systems Analysis Report performed by CONSULTANT.

3.1.2 CONSTRUCTION COST ESTIMATE

A. The CONSULTANT shall provide a cost estimates for the associated design submittal indicated below in accordance with **Exhibit 2 - Design Requirements**.

- Design Submittal 1
- Design Submittal 2
- Design Submittal 3
- Final Design Submittal

3.1.3 CONSTRUCTION SCHEDULE

A. The CONSULTANT shall provide a Preliminary Construction Schedule for the associated design submittal indicated below in accordance with **Exhibit 2 - Design Requirements**.

- Construction Schedule is not Required
- Design Submittal 1
- Design Submittal 2
- Design Submittal 3
- Final Design Submittal

3.1.4 PROCUREMENT ALTERNATIVES

A. The CONSULTANT shall recommend the appropriate procurement alternatives as described in **Exhibit 2 - Design Requirements**.

- Procurement alternatives not required
- Procurement alternatives required

3.2 DESIGN ACTIVITIES

The following services shall be provided by the CONSULTANT or an appropriately qualified subconsultant. In any case, the CONSULTANT shall be responsible for managing all subconsultants, including reviewing their work products prior to submission to the SANITATION DISTRICT.

3.2.1 EASEMENTS, PROPERTY BOUNDARIES AND WORK AREA LIMITS

A. CONSULTANT services related to Easements, Property Boundaries and Work Area Limits on the project are specified in Phase 2 – Preliminary Design and those services shall continue during Phase 3 – Design as required. CONSULTANT shall allocate the budgeted hours between Phase 2 and Phase 3 based on when these services will be required.

3.2.2 TOPOGRAPHIC SURVEY

A. CONSULTANT services related to Topographic Survey on the project are specified in Phase 2 – Preliminary Design and those services shall continue during Phase 3 – Design as required. CONSULTANT shall allocate the budgeted hours between Phase 2 and Phase 3 based on when these services will be required.

3.2.3 UTILITY INVESTIGATION

A. CONSULTANT services related to Utility Investigation on the project are specified in Phase 2 – Preliminary Design and those services shall continue during Phase 3 – Design as required. CONSULTANT shall allocate the budgeted hours between Phase 2 and Phase 3 based on when these services will be required.

B. Final Design Submittal Utility Coordination Reviews

1. During DS3 submittal review, the CONSULTANT shall meet with outside agencies to verify any changes made by agency during final design period and compare them with the Contract Drawings. CONSULTANT shall follow through with due diligence on utilities that do not participate in the USA program, unknown owner of a facility and/or abandoned utilities.
2. During DS3 submittal review, an on-site inspection shall be made in the project area. During the on-site inspection, a senior-level CONSULTANT representative shall walk the site accompanied by the SANITATION DISTRICT's PE and Supervising Inspector. The CONSULTANT's representative shall be experienced in the location and identification of utilities in the field. During the on-site inspection, the CONSULTANT shall document all visible features that indicate utilities within the project area and compare them with the Contract Drawings.

3.2.4 TRAFFIC CONTROL SERVICES

A. CONSULTANT shall secure the services of a Subconsultant to determine the traffic control requirements, prepare final plans and specifications for the selected plan and assist the SANITATION DISTRICT in obtaining approval from the City of Newport Beach.

3.2.5 PUBLIC RELATIONS

A. CONSULTANT services related to Public Relations on the project are specified in Phase 2 – Preliminary Design and those services shall continue during Phase 3 - Design. The CONSULTANT shall allocate the budgeted hours between the Public Relations services in Phase 2 and Phase 3 based on when these services will be required.

3.2.6 ENVIRONMENTAL DOCUMENTATION

A. CONSULTANT services related to Environmental Documentation on the project are specified in Phase 2 – Preliminary Design and those services shall continue during Phase 3 - Design. The CONSULTANT shall allocate the budgeted hours between the Environmental Documentation services in Phase 2 and Phase 3 based on when these services will be required.

3.2.7 PERMITTING ASSISTANCE

A. CONSULTANT services related to Permitting Assistance on the project are specified in Phase 2 – Preliminary Design and those services shall continue during Phase 3 - Design. CONSULTANT shall allocate the budgeted hours between the Permitting Assistance services in Phase 2 and Phase 3 based on when these services will be required.

3.2.8 PROJECT MANAGEMENT

A. CONSULTANT shall be responsible for managing CONSULTANT’s project execution, schedule, budget, subconsultants, and coordination with other projects. CONSULTANT services related to Project Management on the project are specified in Phase 2 – Preliminary Design and those services shall continue during Phase 3 – Design as required. CONSULTANT shall allocate the budgeted hours between Phase 2 and Phase 3 based on when these services will be required.

3.2.9 QUALITY CONTROL

A. The CONSULTANT shall provide Quality Control requirements in accordance with **Exhibit 6 - Quality Control Requirements**.

- Independent Multi-Discipline Design Workshop is not required.
- Independent Multi-Discipline Design Workshop is required. (Design Workshops and Meetings

3.2.10 GENERAL

A. Workshop and meeting planning, requirements, agendas, and meeting minutes shall be in accordance with **Exhibit 5 - Workshop and Meeting Requirements**.

3.2.11 DESIGN PHASE WORKSHOPS

A. The focus of workshops is to review project progress to date and the technical decisions that have been made in focused meetings. CONSULTANT shall conduct the workshops listed below in Phase 3 – Design. The CONSULTANT shall allow the following time for each workshop:

DESIGN PHASE WORKSHOPS	
WORKSHOP TYPE	DURATION
Design Kickoff Workshop (DS2)	1 -- 2 hours
Design Review Meetings (DS2 and DS3)	2 – 2 hours per discipline
Design Validation Meeting (DS3 and FDS)	2 -- 2 hour

B. The following Design Review Meetings shall include the following topics, as applicable to the project:

1. Civil

2. Construction

- C. A single workshop shall be provided for the Design Review Meetings
- D. During final design, workshops shall be held after each design submittal.

3.2.12 PRE-DS2 CONSTRUCTABILITY WORKSHOP (DELETED FROM SOW)

3.2.12 DESIGN PHASE MEETINGS (DELETED FROM SOW)

- 1. .

3.2.13 CONSTRUCTION SUBMITTAL ITEMS LIST MEETING

- A. Meet with the SANITATION DISTRICT between DS2 and DS3 to review the CONSULTANT's approach to developing the project Construction Submittal Items List to include in the specifications and discuss the grouping of submittals in phases.

3.3 BID PHASE SUPPORT SERVICES

3.3.1 BID PHASE SUPPORT SERVICES

- A. CONSULTANT shall provide the following bid period services:
 - 1. Participate in the pre-bid meeting.
 - 2. Prepare project drawing set and project specification addenda to provide clarification and resolve errors and omissions identified prior to bid opening.

3.3.2 BID EVALUATION ASSISTANCE

- A. Participate in the evaluation of the submitted bids, furnish consultation and advice to SANITATION DISTRICT staff, and other analyses as required to finalize the award decision.

3.3.3 CONFORMED DOCUMENT PREPARATION

- A. Within two weeks of the bid date, prepare conformed documents set (drawings, databases, specifications, and other required materials) that incorporates the addenda. See Engineering Design Guidelines, Chapter 01, Design Guidelines – General Requirements, Section 01.4 “Preparation of Project Deliverables” for requirements as modified in Section V of this SOW, “Project-Specific Deviations from the SANITATION DISTRICT’s Design Guidelines” and the requirements of the CAD Manual).

4. PHASE 4 – CONSTRUCTION AND INSTALLATION SERVICES

Not in this SOW.

5. PHASE 5 – COMMISSIONING SERVICES

Not in this SOW.

6. PHASE 6 – CLOSE OUT

Not in this SOW.

7. GENERAL REQUIREMENTS

7.0 GENERAL

7.0.1 OCSD ENGINEERING DESIGN GUIDELINES AND STRATEGIC PLAN

- A. CONSULTANT shall refer to and adhere to the requirements of the Contractor Safety Standards, SANITATION DISTRICT’s Engineering Design Guidelines, any deviations to the Engineering Design Guidelines listed below, and other SANITATION DISTRICT Design Standards referenced therein. **Exhibit 16 - Spec Review using Microsoft Word and Teams**

B. **Exhibit 17 - SANITATION DISTRICT Engineering Design Guidelines and Standards – Available** online at <https://www.ocsd.com/about-us/transparency/document-central/-/folder-917> is a complete set of the Contractor Safety Standards and SANITATION DISTRICT’s Design Standards, the latest edition at the time of the design proposal stage.

C. The Engineering Guidelines define what design concepts/tools/methods and project management requirements shall be adhered to and in what manner they shall be used/provided by Consultants, e.g., requirements regarding design concepts, submittals, documentation details, use of SANITATION DISTRICT’s Master Specifications, and other related SANITATION DISTRICT Standards, etc.

D. Refer also to Section “CONSULTANT’s Responsibilities” in the SANITATION DISTRICT’s Engineering Design Guidelines Chapter 01. Refer to “Master Specifications Instructions for Use” that mandates rules and conventions to be used in all SANITATION DISTRICT project specifications.

E. The project SOW defines whether or not each specific deliverable described in the Guidelines shall be part of the project and when each task shall take place.

F. The project SOW also includes requirements that supplement and/or modify the Guidelines requirements for this project.

G. The project SOW and SANITATION DISTRICT’s Engineering Design Guidelines impact CONSULTANT’s project cost.

H. Except as specified in this SOW, design of all facilities shall conform to the recommendations of the currently approved Master Plan for SANITATION DISTRICT facilities. The project shall also incorporate all applicable mitigation measures included in associated environmental documents and site-specific local requirements.

I. In addition, the SANITATION DISTRICT will require the CONSULTANT to follow subsequent revisions of the Contractor Safety Standards, SANITATION DISTRICT Engineering Design Guidelines and other SANITATION DISTRICT Design Standards up to transmittal by the SANITATION DISTRICT of comments on Design Submittal [1][2], shall be incorporated into the Design by CONSULTANT with no increase in CONSULTANT’s Not-to-Exceed upper limit on fees.

J. The SANITATION DISTRICT may update the SANITATION DISTRICT’s Master Specifications and/or add new SANITATION DISTRICT Master Specifications up to transmittal by the SANITATION DISTRICT of comments on Design Submittal 2. The CONSULTANT shall utilize the new and/or modified Master Specifications for the DS3 submittal.

K. The CONSULTANT shall not begin editing the project specifications until the project team meets with the SANITATION DISTRICT’s Design Standards Custodian to discuss and receive comments regarding the CONSULTANT’s proposed list of project specifications. This meeting will be used to determine which specifications are to use SANITATION DISTRICT’s master specifications, and where other sources will be utilized.

7.0.2 PROJECT PHASES AND TASKS

A. Project tasks and deliverables shall include the requirements described in this SOW. CONSULTANT shall also refer to Appendix A of the SANITATION DISTRICT’s Engineering Design Guidelines for the level of detail requirements for individual deliverables in each Phase of the project not covered in the SOW.

7.0.3 CONSTRUCTION SEQUENCING AND CONSTRAINTS

A. CONSULTANT shall develop with SANITATION DISTRICT staff and include in the Bid Documents detailed requirements for construction sequencing and constraints. These shall ensure safe and reliable operation and maintenance of SANITATION DISTRICT facilities. The facilities must be kept on-line and fully operational with minimal interruptions throughout construction.

7.0.4 WORKING HOURS

A. Meetings with SANITATION DISTRICT staff shall be scheduled from Monday through Thursday between the hours of 8:00 AM and 4:00 PM. Any CONSULTANT staff working on-site shall conform to SANITATION DISTRICT work schedules. CONSULTANT shall refer to the Engineering Design Guidelines, Chapter 01, Section 01.3.5 "CONSULTANT Inspection of Treatment Facilities" for further requirements.

7.0.5 STANDARD DRAWINGS AND TYPICAL DETAILS

A. All the details used in the project (the SANITATION DISTRICT's Standard Drawings and CONSULTANT-developed typical details) shall be shown on the Plans.

7.0.6 SOFTWARE

A. The CONSULTANT is expected to develop and provide the deliverables using the standard software currently approved for use by the SANITATION DISTRICT. The standard SANITATION DISTRICT software includes, but is not limited to, the following:

B. Any software that the CONSULTANT needs to comply with these standards shall be purchased and maintained by the CONSULTANT at no additional cost to the SANITATION DISTRICT. In the event the SANITATION DISTRICT provides the CONSULTANT with access to SANITATION DISTRICT software and hardware at a SANITATION DISTRICT facility in order to facilitate performance of their work, all software shall remain the property of the SANITATION DISTRICT. Only software licensed to the SANITATION DISTRICT shall be installed on SANITATION DISTRICT equipment. In addition, only the SANITATION DISTRICT's IT Department staff will perform the installation of this software.

C. Refer to Chapters 10 and 11 and Appendix A of the SANITATION DISTRICT's Engineering Design Guidelines for requirements on preparation of Criticality Tables and ETAP, SAT, and EID databases. Refer to the SANITATION DISTRICT's CAD Manual and to Chapter 11 and Appendix A of the SANITATION DISTRICT's Engineering Design Guidelines for requirements regarding P&ID drawings.

7.0.7 SUBMITTAL REVIEW USING BLUEBEAM

A. The SANITATION DISTRICT has standardized on the use of Bluebeam Revu for reviewing and providing comments to PDF files. PDF files will be hosted in a Bluebeam cloud-based studio session for review. See **Exhibit 15 - Bluebeam Designer User Training** for a detailed explanation on how Bluebeam will be used to provide, validate, and close submittal review comments.

B. Prior to submitting electronic PDF files, format them as indicated in **Exhibit 14 - Bluebeam Designer Training for Submission** and "the SANITATION DISTRICT's CAD Standards Manual" prior to submission.

C. A one-hour training session on the use of Bluebeam and custom status menu will be provided by the SANITATION DISTRICT. All CONSULTANT team members responsible for quality control and reconciliation of submittal comments shall attend.

7.0.8 WORD TRACK CHANGES

A. Specifications documents and other MS-Word based deliverables will be hosted in the SANITATION DISTRICT's Teams environment for review. The guidelines for reviewing and commenting on MS-Word files, including Specifications reviews, can be found in **Exhibit 16 - Spec Review using Microsoft Word and Teams**.

7.0.9 GIS SUBMITTALS

A. CONSULTANT shall provide the following GIS deliverables propagated from approved design submittals after the design submittal is accepted. These GIS submittals will not be reviewed or presented by the CONSULTANT. The purpose is to provide project specific GIS layers that could be used to visualize interproject dependencies and conflicts.

1. Electronic Submittal
 - a. Kmz files for use with Google Earth
 2. Final PDR
 - a. Single project boundary (Polygon)
 - (1) Boundary to encompass all new facilities and existing to be modified including:
 - Buildings\Structures
 - Tunnels
 - Utilities
 - Pavement
 - Street boundary (ROW to ROW) of possible alignment
 - b. Structures (Polygon)
 - New structure outline
 - Additions to existing structures
 - Structure label
3. DS2, DS3, and FDS
 - a. Project boundary - updated PDR
 - b. Structures - updated from PDR
 - c. Utilities - updated from PDR
 - d. Manholes - updated from PDR
 - e. Excavation of pits - updated from PDR
 - f. Critical (as defined by Dig Alert) utility crossings (Point)
 - (1) Crossing of Dig Alert critical utilities
 - (2) Critical utility label
 - Natural gas
 - Fuel pipeline
 - 12 kV Electrical
 - g. Asphalt (Polygon)
 - (1) Asphalt to be replaced

8. STAFF ASSISTANCE

The SANITATION DISTRICT staff member or designee assigned to work with CONSULTANT on the design of this project is Hardat Khublall at (714) 720-6965, e-mail to: hkhublall@ocsd.com.

9. EXHIBITS

Exhibit 18 - Project Reference Exhibit 1 - Preliminary Design Report Requirements

Exhibit 2 - Design Requirements

Exhibit 3 - Project Management Requirements

Exhibit 4 - Risk Management Requirements NOT USED

- Exhibit 5 - Workshop and Meeting Requirements**
- Exhibit 6 - Quality Control Requirements**
- Exhibit 7 - Design Submittal Requirements Matrix**
- Exhibit 8 - Project Schedule Calculation**
- Exhibit 9 - Deliverables Quantities**
- Exhibit 10 - Sample Construction Cost Estimate Format**
- Exhibit 11 - Sample Full Project Safety Review Plan**
- Exhibit 12 - Sample Risk Management Check List**
- Exhibit 13 - MMRP Log Template**
- Exhibit 14 - Bluebeam Designer Training for Submission**
- Exhibit 15 - Bluebeam Designer User Training**
- Exhibit 16 - Spec Review using Microsoft Word and Teams**
- Exhibit 17 - SANITATION DISTRICT Engineering Design Guidelines and Standards – Available online at <https://www.ocsd.com/about-us/transparency/document-central/-folder-917>**
- Exhibit 18 - Project Reference Material**
 - **7-1-D MacArthur Blvd Force Mains**
 - **7-11-3 Modifications to MacArthur Pump Station**
 - **MP-427 MacArthur Valve Replacement**

HK:dm