TECHNICAL SPECIFICATIONS

[PROJECT TITLE]

Prepared by:

ENGINEER'S STAMP

[DATE]

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SECTION 01010

SUMMARY OF THE WORK

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. Provide all labor, materials, and equipment to [EXAMPLE install new water mains, complete and functional, and abandon portions of existing water mains] as indicated in the Contract Documents including all miscellaneous or incidental work whether shown or specified, or not, as follows:

[EXAMPLE: Construct approximately ___ linear feet (lf) of __-inch diameter water main, installation of gate valves; water meters and private water services; asphalt concrete pavement restoration; Portland cement concrete pavement restoration, dispose of piping and fittings.]

[EXAMPLE: Work includes surveying and construction staking; excavation; installation of below grade polyvinyl chloride (PVC) pipe and fittings; gate valves; thrust blocks and/or thrust restraint fittings; water meters and private water services; connections to existing pipelines; backfill and compaction; asphalt concrete paving removal, Portland cement concrete paving removal, trench paving, cold milling and overlay; restoration of the site and existing improvements damaged during construction;] and procurement of permits by the Contractor and coordination with agencies having jurisdiction over the Work including, but not limited to, the Rincon del Diablo Municipal Water District, and City of Escondido.

B. Work shall conform to the Rincon del Diablo Municipal Water District General Standard Specifications for Construction of Water Transmission Facilities (latest edition), the Standard Specifications for Public Works Construction (Greenbook), latest edition, and applicable jurisdictional agency standards and specifications.

1.02 PROJECT LOCATION

A. The project is located at (insert address) in the City of [XX], CA.

1.03 WORK UNDER THIS SECTION

A. This section defines the Lump Sum Prices, Unit Prices and Allowances listed in the Proposal Bidding Schedule, and the manner in which they will be used to determine measurement and payment for all items included in the Bid Schedule.

B. Payment for all items of the Bid Schedule whether lump sum or unit price shall include all compensation to be received by the Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the work all in accordance with the requirements of the Contract Documents, including all appurtenances hereto, and including all costs of permits and costs of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the California Division of Industrial Safety and the

Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA). No separate payment will be made for any item that is not specifically set forth in the Bid Schedule, and all costs shall be included in the prices named in the Bid Schedule for the various items of work.

C. Final payment for work covered by Unit Prices will be made on the basis of the actual measured quantities accepted by the Engineer multiplied by the Unit Price of the Bid Schedule.

D. Monthly pay requests are due on a certain day of each month (to be determined by District), and while pay requests will be accepted prior to this date, pay request processing will not begin until this date for purposes of meeting the District's pay request processing obligations under the California Public Contract Code. Failure of the Contractor to submit his pay requests by this day may be cause for rejection of the pay request. If rejected, the Contractor may have to resubmit his pay request the next month. Should the submittal date fall on a holiday or weekend day during the month, the Contractor shall consider the next working day as the due date.

E. The work to be performed under this Contract shall consist of furnishing all tools, equipment, materials, supplies, and manufactured articles and furnishing all labor, transportation and services, including fuel, power, water, and essential communications, and performing all work, or other operations required for the fulfillment of the Contract in strict accordance with the Contract Documents. The work shall be complete, and all work, materials, and services not expressly indicated or called for in the Contract Documents which may be necessary for the complete and proper construction of the work in good faith shall be provided by the CONTRACTOR as though originally so indicated, at no increase in cost to the DISTRICT.

F. Work shall conform to the District’s General Standard Specifications for Construction of Water Transmission Facilities and the Standard Specification for Public Works Construction (Green Book), latest edition.

1.04 LAND FOR CONSTRUCTION PURPOSES

A. The Contractor shall coordinate and supply his own construction staging area(s), as necessary. The Contractor shall use these areas at his own risk and shall not be entitled to extensions of time or additional compensation caused by delays in securing such areas, or due to loss of materials stored or maintained at these sites. Additionally, the Contractor shall not interfere in the normal operation of any ancillary or other facilities, either District-owned or not, during the completion of the Work. The Contractor shall maintain full access at all times to all homes, businesses, equipment or other facilities for the conduct of normal and emergency operations.

B. WORK ON PRIVATE PROPERTY

1. Easements on private property are indicated on the Drawings. The Contractor shall stay within the boundaries of easements on private property. The Contractor shall not enter any private property outside the easement boundaries without written permission from the property owner, the Engineer, and the District.

C. WORK ON PUBLIC ROW

1. Use of public Right of Way for laydown shall be cleared and permitted by the governing agency prior to start of work. The District does not have authority to grant permission to use public ROW for laydown, all costs associated with obtaining proper permits shall be included in Contractor's bid.

1.05 NOTICES TO OWNERS AND AUTHORITIES

A. The Contractor shall, as provided in the General Conditions, notify owners of adjacent property and utilities five (5) working days prior to prosecution of any Work which may affect them.

B. When it is necessary to temporarily limit access to a property, or when any utility service connection must be interrupted, the Contractor shall give notices ten (10) working days in advance to the affected persons. Written notices will conform to any applicable local ordinance and will include appropriate information concerning the interruption and instructions on how to limit their inconvenience. All interruptions caused by the Contractor or the Work shall be coordinated and pre-approved by the District, without exception. Failure to acquire prior District approval shall result in the Contractor being liable for all costs associated with the interruption of services.

C. The Contractor shall notify District and District will distribute notices for the following circumstances:

1. Water service interruptions.

D. The Contractor shall notify District and the Contractor will be responsible for distributing notification for the following:

1. Pre-construction videotaping or photographs;
2. Excavation, pavement construction, or pavement slurry seal which temporarily prohibits access to public or private streets or properties.

1.06 UNFAVORABLE CONSTRUCTION CONDITIONS

A. During unfavorable weather, wet ground, or other unsuitable construction conditions, the Contractor shall confine his operations to Work which will not be affected adversely by such conditions. No portion of the Work shall be constructed under conditions which would adversely affect the quality or efficiency thereof, unless special means or precautions are taken by the Contractor to perform the Work in a proper and satisfactory manner.

1.07 CONFINED SPACE PROGRAM

A. The Contractor shall develop and implement a confined space program meeting the requirements of CFR 1910.146 and California Title 8, Art. 108, Sec. 5157. This program shall be submitted to the District for review, within ten (10) days after the Notice to Proceed.

1.08 COOPERATION AND COLLATERAL WORK

A. The Contractor shall be responsible for ascertaining the nature and extent of any simultaneous, collateral, and essential work by others. The District, its workers and contractors, and others shall have the right to operate within or adjacent to the Work site during performance of such Work. The District, the Contractor, and each of such workers, contractors and others, shall coordinate their operations and cooperate to minimize interference.

B. The Contractor shall include in his/her Bid all costs involved as a result of coordinating his/her Work with others. The Contractor shall not be entitled to additional compensation from the District or the Engineer for damages resulting from such simultaneous, collateral, and essential work. If necessary to avoid or minimize such damage or delay, the Contractor shall re-deploy its work force to other parts of the Work. Should the Contractor be delayed by the Agency, and such delay could not have been reasonably foreseen or prevented by the Contractor, the Engineer will determine the extent of the delay, the effect on the project, and any extension of time. The decision of the Engineer shall be final.

1.09 MAINTENANCE OF SYSTEM OPERATIONS

A. The Contractor shall maintain all District facilities in operation during the progress of the Work. All costs incurred as a result of the Contractor's disabling of system operations prior to the approval of the District and the Engineer shall be the sole responsibility of the Contractor, including any fines or other mitigatory costs resulting from the Contractor's actions.

1.10 SUMMARY OF CONSTRUCTION PROCEDURES

A. The Contractor shall provide to the District and the Engineer, within fifteen (15) calendar days after the Notice to Proceed, a schedule denoting the sequence of construction to be followed during the project. The Contractor shall revise his/her construction sequence based on this review at no additional cost to the District to avoid potential coordination impacts. This review is for the benefit of the Contractor and shall in no way relieve the Contractor of his/her responsibilities discussed in Paragraph 1.10 of these Specifications.

PART 2 – MEASUREMENT AND PAYMENT

2.01 MEASUREMENT

A. LINEAR MEASUREMENTS

Linear measurements shall be based upon the projection of the centerline of the pipeline or structure onto a horizontal plane and inclusive of the length through tees, bends, valves, and fittings and as shown on the Drawings for its limits unless otherwise specified. Appurtenances shall be included in the bid item for which the linear measurement is made unless such appurtenances are described for payment in a separate pay item.

B. AREA MEASUREMENTS

Area measurement shall be based upon the projection of the surface area onto a horizontal plane and measured in acres, square yards, square feet, or as indicated for the bid item.

C. VOLUME MEASUREMENTS

Measurement for bid items involving volume units shall be based upon the volume measured in cubic feet, cubic yards, or as indicated for the bid item.

D. WEIGHT MEASUREMENTS

Measurement for bid items involving weight units of the item shall be based upon the number of pounds, tons, or as indicated for the bid item.

E. UNIT MEASUREMENTS

Measurement for bid items involving units of the item shall be based upon the number of units installed and counted as indicated in the bid item.

F. LUMP SUM MEASUREMENT

Lump sum items shall include all labor, materials, equipment, and incidentals as required by the Contract Documents for the complete installation of the bid items. No separate payment shall be made for items not included by the Contractor in the total contract Bid Price.

2.02 PAYMENT

A. LUMP SUM PRICES:

The Contractor shall provide Lump Sum Prices in the Bid Schedule for all work in the Contract Documents, except items of work listed in the Contract as Unit Priced Items. For Lump Sum items, only the total amount needs be filled in.

B. UNIT PRICED ITEMS:

Unit Price Items are provided by the District for additive or deductive Work not presently identified in the Contract Documents. In the appropriate places on the Bid Schedule, each Bidder shall quote Unit Prices for the items of work in the units stated. Each unit price, whether additive or deductive, shall cover all costs and charges, including, without limitation, the costs of material, fabrication, delivery, installation or application, supervision, bond and insurance charges, overhead, profit, and taxes. Unit Prices shall be the exact amount per unit to be applied to the units of work actually provided or not provided for the purpose of modifying the Contract Price or establishing the payment due the Contractor, as applicable. Unit Prices provided by the District shall be held good and in effect until the work is completed and accepted by the District. Contractor-proposed Unit Prices which are so unbalanced as to be detrimental to the District's interest may be rejected or cause rejection of the Bidder's entire bid at the discretion of the District.

C. ALLOWANCE ITEMS:

Allowance Item amounts are provided by the District to cover the cost of additive Work not presently identified in the Contract Documents. Payment for Allowance Items will be made only when authorized as described in Part 1.03, below.

D. RETENTION:

Payment for all bid items is subject to the retention provisions set forth in these specifications, or five percent (5%), whichever is greater.

E. SCHEDULE:

All scoped Allowance Bid Items and Unit Priced Bid Items are included in the scope of the Contract without specific locations for the work provided. The District reserves the right to direct that these scoped items of work be performed when they are encountered, and the Contractor is obligated to accommodate this work within the original contract duration. The Contractor will not be entitled to additional time regardless of where work is encountered.

The District reserves the right to vary the total contract price by +/- 25% by varying the Unit Price quantities and authorized Allowance amounts within their respective individual limits.

F. STIPULATED OR BID UNIT PRICES:

When the District's use of a Unit Price Bid Item exceeds 200% of the Bid Item quantity, the Contractor or District may demand that the Unit Price Item be renegotiated for quantities in excess of 200%, whether the price is stipulated or bid. This provision is to prevail over any conflicting general condition provision.

G. SPECIFIED ITEMS AND STIPULATED PRICES:

The stipulated price for these items cannot be invoiced until the item is complete and accepted by the Engineer and the District.

2.03 BID ITEMS

The CONTRACTOR shall provide all labor, materials, equipment and incidentals for the work described within these specifications and construction drawings. Payment for each bid item shall be included in the contract unit price or lump sum price shown on the Bidder's proposal. Measurement for payment of lump sum items will be based on the component parts listed in the Bid Items, as required in this specification. Payment for component parts will be based on the Schedule of Values approved by the DISTRICT. The cost breakdown shall include quantities and items aggregating the Bid Item in payments during construction. All measurements of quantities shall be approved by the DISTRICT. Payment for each bid item shall include full compensation for all labor, materials, tools, and equipment necessary to complete the work as shown on the construction drawings and within these specifications and no additional compensation shall be allowed. This includes the cost of work not specifically listed in the Bid Schedule or Schedule of Values but is necessary to complete the project as described and shown in the Contract Documents. Work for which no separate payment has been provided will be considered a subsidiary obligation of the CONTRACTOR, and the cost therefore shall be included in the applicable contract price for the item to which the work applies. All measurements of work done will be made by the DISTRICT or its representative.

A. MOBILIZATION, DEMOBILIZATION, PERMITS, AND SITE CLEANUP (BID ITEM NO. 1)

Payment for mobilization, demobilization, permits, and site cleanup shall be made at the contract price complete and in accordance with the Contract Documents. The contract price shall include, but is not limited to the following principal items: obtaining and complying with permits not included in any other bid item; mobilizing labor force, equipment and construction facilities; providing field offices and storage yard; securing construction water supply; providing all temporary construction fencing and safety barriers; providing on-site sanitary facilities; providing project signs; filing of Notice of Intent with the Regional Water Quality Control Board for groundwater discharge or pipeline dewatering permits or waivers; procuring encroachment, construction, or traffic control permits from the City of [XX]; posting OSHA requirements and establishing safety programs; preparing the Construction Schedule and Schedule of Values prior to the pre-construction meeting; daily cleanup; material submittals; This work also includes the cost for maintaining and submitting the project record drawings at the end of the project. These record drawings must be reviewed monthly with the DISTRICT to receive payment for any work; and all incidentals for the mobilization, final cleanup, punchlist, demobilization, and permits for construction of the project as described in the Contract Documents.

Payment for this bid item shall be limited to 4 percent of the total contract price.

B. INSURANCE AND BONDS (BID ITEM NO. 2)

Payment for insurance and bonds shall be made at the contract price complete and in accordance with the Contract Documents including, but not limited to all insurance and bonds required for performance of the work, including additional insureds as required by agency permits, and all incidental expenses involved in obtaining insurance and bonds.

Payment for this bid item shall be limited to 5 percent of the total contract price.

C. PRE/POST CONSTRUCTION VIDEOTAPES AND PHOTOGRAPHS (BID ITEM NO. 3)

Payment for the pre/post-construction videotapes and photographs will be paid for at the contract lump sum price, complete and in accordance with the Contract Documents, and as directed by the DISTRICT. The contract price for work under this item shall include but not be limited to furnishing all labor, material, tools, and equipment and performing all work required at each construction site location for the completion of the pre/post-construction videotapes and photographs as described in the Contract Documents. All work shall be considered as compensated for in the lump sum price and no additional compensation shall be made thereafter.

Payment for this bid item will be made at the lump sum bid price.

D. TEMPORARY EROSION CONTROL/STORM WATER POLLUTION PREVENTION PLAN (SWPPP) (BID ITEM NO. 4)

Payment for the temporary erosion control/storm water pollution prevention plan (SWPPP) shall be made at the contract lump sum price, complete and in accordance with the Contract Documents and as directed by the DISTRICT. The Contract Price for work under this item shall include but is not limited to furnishing all labor, material, tools, and equipment and performing all work required for establishing, maintaining, operating, and providing all reporting for a complete site erosion control and storm water pollution prevention plan to be implemented throughout construction. This includes but is not necessarily limited to preparation of all required plans and regulatory DISTRICT submittals, the operation and protection of the site drainage systems (at a minimum, daily street sweeping with a wet vacuum enabled street sweeper), sampling, monitoring, reporting, desilting basins and risers, fiber rolls, erosion control blankets, silt fences, gravel bags, berms, stabilized construction entrances, or other measures as described in the CONTRACTOR's project-specific storm water pollution prevention plan and as necessary to provide a complete erosion control program in complete compliance with all applicable Regional Water Quality Control Board (RWQCB) and all other jurisdictional requirements. The CONTRACTOR shall be responsible for providing a certified QSD to prepare Permit Registration Documents (PRD) and comply with the SMARTS system and coordinate with the DISTRICT's designated Legally Responsible Party (LRP) throughout the duration of the project. The CONTRACTOR shall also provide a certified QSP for the duration of the construction and comply with all monitoring, reporting, and inspection as designated by the RWQCB.

Payment for TEMPORARY EROSION CONTROL/STORM WATER POLLUTION PREVENTION PLAN (SWPPP) will be made at the lump sum bid price. All work shall be considered as compensated for in the lump sum price and no additional compensation shall be made thereafter. For bidding purposes CONTRACTOR shall assume Type 2 risk level for Linear Underground Project (LUP).

[The project has an estimated disturbance area of less than one acre and is exempt from the requirements of the Construction General Permit. (VERIFY ON PER PROJECT BASIS)]

E. EXCAVATION SUPPORT SYSTEM (BID ITEM NO. 5)

Payment for excavation support system shall be made at the contract price complete and in accordance with the Contract Documents. The contract price shall include, but is not limited to obtaining and complying with all permits and regulations of the California Occupational Safety and Health (Cal/OSHA); preparing and submitting plans by a licensed Engineer and obtaining State Division of Industrial Safety permit(s) for excavations that are 5 feet deep or greater, and incidental work for sheeting, shoring, or bracing systems; sloping or benching of excavation side slopes; or other protective systems necessary for the support of trench excavations or for worker protection from materials or equipment that could pose a hazard by falling or rolling into excavations.

Payment for this bid item, will be made at the lump sum bid price.

F. TRAFFIC CONTROL (BID ITEM NO. 6)

Payment for traffic control will be made at the contract price complete and in accordance with the Contract Documents. The contract price for work under this item shall include but not be limited to furnishing all labor, material, and equipment and performing all work required to prepare traffic control plans per City of [XX], including permit fees and implement all traffic control for the entire project. This shall include furnishing, installing, and maintaining all barriers, signage, boards, flagging, and all other work necessary for performance of the work and for compliance with all regulatory requirements and permits. The Traffic Control plans must be submitted to and approved by the DISTRICT and prepared by a licensed Civil Engineer in the State of California.

Traffic control shall include a CalTrans permit for traffic control equipment (cones, etc.) if placed in the CalTrans right of way. This includes traffic control for mainline work, connection work, potholing and all other work requiring traffic control.

Payment for TRAFFIC CONTROL will be made at the lump sum bid price.

G. UTILITY LOCATING & POTHOLING (BID ITEM NO. 7)

Payment for utility locating and potholing will be made at the contract price complete and in accordance with the Contract Documents. The contract price for work under this item shall include but not be limited to furnishing all labor, material, and equipment and performing all work required for coordination of standby utility company personnel; potholing existing utilities prior to any excavation work at pipeline connection points, crossing utilities, and all utilities within 5 feet on either side of the centerline of the proposed construction or outermost limits of the proposed structures as required by the Contract Documents. Potholing of existing utilities that parallel the proposed pipeline shall be conducted at an interval sufficient to establish their locations relevant to the Work and not to exceed 50 feet measured parallel to the centerline of construction. Potholing must be done and report submitted with the findings at least one week prior to beginning trenching operations. The report must contain at a minimum; pictures, depths, type of utility, location, and note any conflicts with contract drawings.

Payment for this bid item will be made at the lump sum bid price.

H. WATER MAIN - PVC (BID ITEM NO. 8)

Payment for water main of the type, size and class specified in the Contract Documents and on the bid schedule will be made at the contract price, complete in place, in accordance with the Contract Documents. The contract price for work under this item shall include, but not be limited to pavement saw cutting and/or cold milling, removal, and disposal; excavation, removing and/or plugging interfering abandoned conduits or structures; dewatering and any required treatment; water disposal; surplus material disposal; pipe; fittings; pipe supports; linings and coatings; wax tape and coating; utility marker tape; tracer wire; thrust blocks and/or restraint devices; temporary trench plating; bedding, backfill and compaction; third party compaction testing; pipeline pressure testing and disinfection; temporary materials required for pressure testing and disinfection; aggregate base; placement and removal of temporary paving materials; third party bacteria and plate count testing; final pavement replacement per City of [XX]; following shutdown and outage requirements; removal and abandonment of old appurtenances, gate wells, and pipe; removal and disposal of asbestos concrete pipe; installation, disinfection, removal, and maintenance of highline; removing and protecting trees and landscape as shown on plans and all other incidental work.

Measurement of installed pipeline shall be made to the nearest foot along the centerline projection of the pipeline into a horizontal plane. Payment for WATER MAIN – PVC will be made at the linear foot unit bid price.

I. WATER MAIN – DUCTILE IRON PIPE (BID ITEM NO. 9)

Payment for the construction of new water main of the type, size and class specified in the Contract Documents and on the bid schedule will be made at the contract price, complete in place, in accordance with the Contract Documents and as directed by the District. The contract price for work under this item shall include, but not be limited to pavement saw cutting and/or cold milling, removal, and disposal; excavation, removing and/or plugging interfering abandoned conduits or structures; dewatering and any required treatment; water disposal; surplus material disposal; pipe; fittings; pipe supports; linings and coatings; polyethylene encasement; wax tape and coating; utility marker tape; tracer wire; thrust blocks and/or restraint devices; temporary trench plating; bedding, backfill and compaction; third party compaction testing; pipeline pressure testing and disinfection; temporary materials required for pressure testing and disinfection; aggregate base; placement and removal of temporary paving materials; third party bacteria and plate count testing; final pavement replacement per City of [XX]; following shutdown and outage requirements; removal and abandonment of old appurtenances, gate wells, and pipe; removal and disposal of asbestos concrete pipe; installation, disinfection, removal, and maintenance of highline; removing and protecting trees and landscape as shown on plans and all other incidental work.

Measurement of installed pipeline shall be made to the nearest foot along the centerline projection of the pipeline into a horizontal plane. Payment for WATER MAIN – DUCTILE IRON PIPE will be made at the linear foot unit bid price.

J. WATER MAIN – CML&C STEEL (BID ITEM NO. 10)

Payment for water main of the type, size and class specified in the Contract Documents and on the bid schedule will be made at the contract price, complete in place, in accordance with the Contract Documents. The contract price for work under this item shall include,

but not be limited to pavement saw cutting and/or cold milling, removal, and disposal; excavation, removing and/or plugging interfering abandoned conduits or structures; dewatering and any required treatment; water disposal; surplus material disposal; pipe; fittings; pipe supports; linings and coatings; wax tape and coating; utility marker tape; tracer wire; thrust blocks and/or restraint devices; concrete pier supports; temporary trench plating; bedding, backfill and compaction; third party compaction testing and special inspection; pipeline pressure testing and disinfection; temporary materials required for pressure testing and disinfection; aggregate base; placement and removal of temporary paving materials; third party bacteria and plate count testing; following shutdown and outage requirements; air vac on top of pipe.

Measurement of installed pipeline shall be made to the nearest foot along the centerline projection of the pipeline into a horizontal plane. Payment for WATER MAIN – CML&C STEEL will be made at the linear foot unit bid price.

K. RESILIENT SEAT GATE VALVE (BID ITEM NOS. 11)

Payment for resilient seat gate valves of the size and type specified in the Contract Documents and on the bid schedule will be made at the contract price for each valve assembly, complete in place, in accordance with the Contract Documents. The contract price for work under this item shall include, but not be limited to, procurement, delivery, installation, and testing; actuators of the type shown or specified; polyethylene encasement; concrete anchor blocks; valve stem extensions; valve wells and covers; and fittings and all miscellaneous hardware. No separate measurement or payment will be made for items incidental to open trench construction (i.e., excavation, dewatering, pavement restoration, etc.) for the pipeline on which the valves are installed and that are included under a separate bid item.

Payment for this bid item will be made at the per each unit bid price.

L. BUTTERFLY VALVE (BID ITEM NOS. 12)

Payment for butterfly valves of the size and type specified in the Contract Documents and on the bid schedule will be made at the contract price for each valve assembly, complete in place, in accordance with the Contract Documents. The contract price for work under this item shall include, but not be limited to, procurement, delivery, installation, and testing; actuators of the type shown or specified; polyethylene encasement; concrete anchor blocks; valve stem extensions; valve wells and covers; and fittings and all miscellaneous hardware. No separate measurement or payment will be made for items incidental to open trench construction (i.e., excavation, dewatering, pavement restoration for the pipeline on which the valves are installed and that are included under a separate bid item.

Payment for this bid item will be made at the per each unit bid price.

M. AIR AND VACUUM VALVE ASSEMBLY (BID ITEM NOS. 13)

Payment for air and vacuum valve assemblies of the size specified in the Contract Documents and on the bid schedule will be made at the contract price for each assembly, complete in place, in accordance with the Contract Documents. The contract price for work under this item shall include all labor, materials, equipment and incidentals for the

installation and testing including service saddles; fittings; tubing; corporation stops; polyethylene encasement; isolation valves; valve well and cover; air valves and enclosures; concrete support pads; and miscellaneous hardware. The contract price for each assembly shall include all costs for pavement removal and disposal; excavation; backfill; compaction; replacement of pavements, curbs, gutters, asphalt concrete berms; and all incidental work along the lateral piping regardless of length or depth.

Payment for this bid item will be made at the per each unit bid price.

N. BLOW-OFF ASSEMBLY (BID ITEM NOS. 14)

Payment for blow-off assemblies of the size specified in the Contract Documents and on the bid schedule will be made at the contract price for each assembly, complete in place, in accordance with the Contract Documents. The contract price for work under this item shall include all labor, materials, equipment and incidentals for installation and testing and including piping; fittings; service saddles; linings and coatings; polyethylene encasement; concrete anchor or thrust blocks; restrained joint fittings; isolation valves; valve wells, covers, and stem extensions; guard posts; concrete support pads; and miscellaneous hardware. The contract price for each assembly shall include all costs for pavement removal and disposal; excavation; backfill; compaction; replacement of pavements, curbs, gutters, asphalt concrete berms; and all incidental work along the lateral piping regardless of length or depth.

Payment for this bid item will be made at the per each unit bid price.

O. FIRE HYDRANT ASSEMBLY (BID ITEM NOS. 15)

Payment for fire hydrant assemblies of the type specified in the Contract Documents will be made at the contract price for each fire hydrant assembly, complete in place, in accordance with the Contract Documents. The contract price for work under this item shall include all labor, materials, equipment and incidentals for installation and testing and including hydrants, lining and coatings; guard posts; concrete splash/housekeeping pad; concrete anchor blocks; valve stem extensions; valve wells and covers; fittings; and all miscellaneous hardware. The contract price for each assembly shall include all costs for pavement removal and disposal; excavation; backfill; compaction; replacement of pavements, curbs, gutters, asphalt concrete berms; and all incidental work along the lateral piping regardless of length or depth.

Payment for this bid item will be made at the per each unit bid price.

P. WATER SERVICE (BID ITEM NOS. 16)

Payment for this bid item will be made at the contract price in accordance with the Contract Documents. The contract price for work under this item shall include, but not be limited to, all labor, materials, equipment, and incidentals required to install new water service from the new water main to the existing or new water meter (new water meters to be furnished by District). Payment shall include notification to and coordination with the property owners and the District; service saddles, corporation stops, water service tubing, meter box, testing and disinfection; capping and abandonment of existing water services; disposal of removed materials; site restoration; and all incidental work necessary for a

complete and properly functioning installation. This item shall include all excavation; bedding; backfilling; compaction; dewatering; water control; exporting and disposal of excavated or surplus material; and trench resurfacing per SD County G-24 not included in any other bid item. Payment shall include the Contractor's field locating of water services and verification of existing conditions sufficiently ahead of time to allow for design revisions if actual conditions differ than what is shown on the plans.

Payment for this bid item will be made at the per each unit bid price.

Q. ABANDON EXISTING WATER SERVICES (SIZE MATCHES QUANTITY OF NEW SERVICES) (BID ITEM NOS. 17)

Payment for the work to abandon each existing water service (size matches the size of the new service) shall be made at the contract unit price, complete and in accordance with the Contract Documents and as directed by the DISTRICT. The Contract Price for work under this item shall include furnishing all labor, material, tools, and equipment and performing all work required to abandon each water service per the District Standard Specifications, and all other work necessary to complete the installation work as described within the Contract Documents. All work shall be considered as compensated for in the unit price and no additional compensation shall be made thereafter.

Payment for this bid item will be made at the per each unit bid price.

R. PIPELINE CONNECTIONS (BID ITEM NOS. 18)

Payment for pipeline connections at the locations specified on the bid schedule will be made at the contract price, complete in place, in accordance with the Contract Documents. The contract price for work under this item shall include but not be limited to the following: coordination with the District, City of Escondido, and/or utility companies for work during or outside of normal working hours; submittal of a shutdown plan identifying the shutdown and construction sequence and schedule; and all excavation, dewatering, water disposal, surplus material disposal, connections to existing pipelines, closing and/or removing interfering abandoned conduits or structures, bedding, backfill, compaction, trench plating, temporary asphalt concrete paving, hydrostatic pressure testing, disinfection, hot tap, and all other labor, materials, and equipment that are incidental to pipeline connections and that are not included in any other bid item.

Payment for this bid item will be made at the per each unit bid price. Payment for pipeline connections at locations other than those listed in the bid schedule shall be considered included in the bid item for Water Main for which the connections are incidental thereto.

S. ASPHALT AND PAVING (BID ITEM NOS. 19)

Payment for work described as asphalt and paving shall be made at the contract unit price in accordance with the Contract Documents and as directed by the CITY. The work shall include, but not be limited to, furnishing all labor, materials, tools, equipment, supplies, supervision, and incidentals required to perform full width 1.5-inch pavement grind or removal and 1.5-inch overlay, all site grading, AC paving, concrete paving, curb and gutter, removal and replacement of existing fencing where necessary, and all other work necessary to prepare the surfaces for an asphalt overlay such that the final grade of the asphalt cement

paving matches the existing grade, in accordance with requirements within the Contract Documents. This work shall also include protection of existing facilities to remain.

Payment for this bid item will be made at the linear foot unit bid price. For bidding purposes, Contractor shall assume [##]-ft wide road.

T. OVER EXCAVATION (BID ITEM NOS. 20)

Payment for Over Excavation shall be made at the contract unit price, complete and in accordance with the Contract Documents and as directed by the DISTRICT. The Contract Price for work under this item shall include furnishing all labor, material, tools, and equipment and performing all work required to the trench over excavation to 2 feet below the bottom of the trench, only when ordered in advance by the DISTRICT, and as described within the Contract Documents, not included elsewhere, per Rincon Design Standards, and Rincon Standard Drawing W-3. All work shall be considered as compensated for in the unit price and no additional compensation shall be made thereafter.

Payment for this bid item will be made at the cubic yard unit bid price.

U. ROCK REMOVAL (BID ITEM NOS. 21)

Payment for the Rock Removal shall be made at the contract unit price, complete and in accordance with the Contract Documents and as directed by DISTRICT. The contract price for work under this item shall include, but not be limited to, furnishing all labor, material, tools and equipment, to remove rock and shall include any method of rock removal including, but not limited to rock breaking equipment, including, but not limited to, protecting existing features, monitoring, and all other work necessary for rock removal. The term “rock removal” shall be understood to indicate a method of removal and not geological formation, refer to Section 02223. The contract price for work under this item shall also include hauling, transportation, disposal, processing and all other work necessary to complete this item of work as described in the Contract Documents. The DISTRICT reserves the right to vary quantities plus or minus 50% using the bid unit price to accommodate conditions encountered on the project. These adjustments are considered to be within the original contract scope and as such will not be considered as a basis for extra work, extra cost, or extra time.

Payment for this bid item will be made at the cubic yard unit bid price.

V. DEWATERING (BID ITEM NOS. 22)

Payment for the work described as dewatering shall be made at the contract lump sum complete and in accordance with the Contract Documents. The work shall include, but not be limited to, furnishing all labor, material, tools and equipment, and performing all work required for water control, treatment, legal disposal, additional shoring, testing, obtaining and complying with a Special Use Discharge Permit from the San Diego Regional Water Quality Control Board (SDRWQCB) and all other work necessary to complete this work.

Payment for this bid item will be made at the lump sum bid price.

W. SITE RESTORATION, PAVEMENT MARKINGS AND STRIPING (BID ITEM NOS. 23)

Payment for restoration, pavement markings and striping of the project site shall be made at the contract lump sum price, complete and in accordance with the Contract Documents, and as directed by the DISTRICT. The Contract Price for work under this item shall include furnishing all labor, material, tools, and equipment and performing all work required to complete the restoration of the project sites including, but not limited to mailboxes, survey monuments, landscaping, irrigation, any replacement of other public or private property damaged during the course of construction, replacement of pavement marking striping complete and in accordance with 2018 Caltrans Standards. Contractor shall submit a plan to be approved by City personnel prior to completing the markings and striping. All work shall be considered as compensated for in the lump sum price and no additional compensation shall be made thereafter.

Payment for this bid item will be made at the lump sum bid price.

X. TEMPORARY BYPASS PUMPING (BID ITEM NOS. 24)

Payment for work described as temporary bypass pumping shall be made at the contract lump sum complete and in accordance with the Contract Documents. The work shall include, but not be limited to, furnishing all labor, material, tools, equipment, and performing all work required for procurement, delivery, installation, and testing of the equipment required to perform temporary bypass pumping and all other work necessary to complete this work as described in the Contract Documents

Payment for this bid item will be made at the lump sum bid price.

PART 3 – EXECUTION

3.01 WORK SEQUENCE:

A. All of the following sequence items shall be contingent on the CONTRCTOR obtaining approval from the CITY's and/or COUNTY's Traffic Engineer as a part of CONTRACTOR's prepared Traffic Control Plans.

B. The general sequence of work shall be as follows:

1. The CONTRACTOR shall provide a two-week written notice to the District notifying of any shutdown activities.
2. Submit proposed schedule of work, insurance and bonds. The CONTRACTOR is responsible for supplying electrical power for the entire project length. Obtain required permits, licenses, and jurisdictional approvals. After construction survey, call Underground Service Alert (DIGALERT) and utility owners to obtain mark out of buried utilities.
3. If required, the CONTRACTOR is responsible for obtaining a construction water meter from the DISTRICT for any temporary water usage throughout duration of construction.
4. Secure laydown/staging areas. The CONTRACTOR shall obtain written approval for use of any public or private rights-of-way.
5. Take pre-construction photographs and video log of pipeline alignment and along proposed work areas (potential layout or staging areas, etc.).

6. Identify and pothole all points of connection and existing utilities crossing the pipeline alignment and those parallel to it within 5 feet, and submit potholing record drawing results to DISTRICT for review, prior to starting any construction. Allow 10 working days for review.
7. Submit shop drawings and other submittals required by the plans or Contract Documents.
8. Begin manufacturing and shipping materials and equipment after receiving approved submittals.
9. Complete work according to approved Proposed Work Schedule.
10. Complete Punch List items.
11. Finalize clean up and restore construction areas.
12. Provide warranty as specified.

END OF SECTION

SECTION 01015

GENERAL REQUIREMENTS

PART 1 - GENERAL

1.01 DEFINITIONS

A. Wherever the following terms or pronouns occur in these Standard Specifications or in related documents, the intent and meaning shall be interpreted as follows:

1. **"Approved Plans"** shall mean the official plans, profiles, typical cross-sections, working drawings, detail drawings, or exact reproductions thereof, approved by the DISTRICT and other appropriate government agencies, which show the locations, character, dimensions, and details of the work required to construct the specified public improvements.

2. **"Approved Materials List"** shall mean the listing of those materials reviewed, tested, and allowed for use by the DISTRICT for installation of its facilities (which may include potable water, recycled water and sewer facilities).

3. **"Board"** shall mean the Board of Directors of the DISTRICT.

4. **"Contractor"** shall mean the independent person, firm, corporation or partnership with whom the DISTRICT or Developer contracts for the performance of the work or any part thereof covered by the Approved Plans and these Standard Specifications. Instructions or information given by the DISTRICT to the Contractor's superintendent or agent on the Project shall be considered as having been given to the Developer.

5. **“Standards”** shall mean the current version of the DISTRICT’s Standard Design Standards and Specifications for Potable Water, Recycled Water and Sewer Facilities.

6. **"Developer"** shall mean the independent person, firm, corporation or partnership whose purpose is the development of property. The Developer shall, at all times be represented on the Project in person or by a duly designated agent (Contractor or Private Engineer). Instructions or information given by the DISTRICT to the Contractor's superintendent or agent on the Project shall be considered as having been given to the Developer.

7. **"DISTRICT"** shall mean the Rincon del Diablo Municipal Water DISTRICT.

    1. For the unique purpose of these Standard Specifications, DISTRICT shall also refer to the DISTRICT's representative(s) acting within the scope of the particular duties entrusted to them.

    2. The DISTRICT shall resolve any and all issues which may arise with regard to the quality or acceptability of approved materials furnished or work performed, to the manner of performance and rate of progress of the work and shall answer all questions relating to the interpretation of the Standard Drawings, the Approved Plans, the job

specifications, if any, and these Standard Specifications as well as the acceptable fulfillment of the Contract on the part of the Developer.

8. **"DISTRICT Engineer"** or **"Engineer"** shall mean the DISTRICT's Chief Engineer, or the DISTRICT's General Manager, acting either directly or through properly authorized agents, such agents acting severally within the scope of the particular duties entrusted to them.

9. **"Engineer of Work"** or **"Private Engineer"** shall mean a Civil Engineer or Structural Engineer registered or licensed in California who is qualified to act as an agent of the Developer in preparing plans for facilities to be approved and accepted by the DISTRICT and incorporated thereafter into the DISTRICT's system

10. **"Inspector"** shall mean the DISTRICT's authorized agent whose duties shall include those defined elsewhere within these Standard Specifications, but who shall not direct the work being performed.

11. "**Owner"** shall mean one of two things:

    3. For CIP projects, **"Owner"** shall mean the Rincon del Diablo Municipal Water District.

    4. For development projects, **"Owner"** shall mean the developer until the project has been handed over to the DISTRICT, after project closeout.

12. **"Project"** or the **"Work"** shall mean the public improvement to be constructed in whole or part within the boundaries of the DISTRICT.

13. **"Standard Drawings"** shall mean the standard details issued by the DISTRICT for construction of DISTRICT facilities.

14. **"Standard Specifications**" shall mean the current version of the Water Agencies' Standard Specifications for Potable Water, Recycled Water and Sewer Facilities as adopted and published by the member agencies of the Water Agencies' Standards Committee.

1.02 LICENSE

A. The Contractor installing any new facilities or performing work on existing facilities within the DISTRICT shall possess, prior to the start of the Project, a License, defined by the latest edition of the California Contractor's License Law and Reference Book, as:

1. Class A or C-34 for water pipeline installations.

2. Class A or C-42 for sewer pipeline installations.

3. Class A for major water and sewer facilities such as pump stations, reservoirs, and treatment plants.

B. Any Contractor possessing a license other than a Class A must receive written approval from the DISTRICT prior to initiating the work.

1.03 OPERATIONS IN PUBLIC RIGHT-OF-WAY

A. Work in public right-of-way shall be done in accordance with the requirements of the permit issued by the public agency in whose right-of-way the work is located, in addition to the requirements of the Approved Plans and Standard Specifications. If a permit is not required, the work shall conform to the standards of the public agency involved in addition to conforming to the Approved Plans and Standard Specifications.

1.04 STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS

A. The Contractor shall abide by the conditions of the Regional Water Quality Control Board, General Construction Activity Storm Water Permit and the project Storm Water Pollution Prevention Plan (SWPPP).

1.05 REFERENCE STANDARDS

A. The reference standards of the organizations listed below form a part of these Standard Specifications to the extent referenced and are referred to in the text by the basic designation only. Reference shall be made to the latest edition of said standards unless otherwise stated.

	AGENCY	**ADDRESS**
AASHTO	American Association of State Highway and Transportation Officials	444 N. Capital St. Washington, D.C. 20004
ACI	American Concrete Institute	P.O. Box 19150 Detroit, MI
ANSI	American National Standards Institute	1430 Broadway New York, NY 10018
ASA	American Standards Association	70 East 45th Street New York, NY 10017
ASME	American Society of Mechanical Engineers	345 E. 47th Street New York, NY 10017
AISC	American Institute of Steel Construction	130 East Randolph, Chicago, IL 60601
AISI	American Iron and Steel Institute	25 Massachusetts Ave. Washington, DC 20001
ANSI	American National Standards Institute	1899 L Street, Washington, DC 20036

ASTM	American Society for Testing and Materials	1916 Race Street Philadelphia, PA 19103
AWS	American Welding Society	550 N.W. Le Jeune Rd. Miami, FL 33135
AWWA	American Water Works Association, Inc.	6666 W. Quincy Ave. Denver, CO 80235
CAL/ OSHA	State of California Occupational Safety and Health Administration	1006 Fourth Street Sacramento, CA 95814
CFR	Code of Federal Regulations	Office of Federal Register National Archives Administration Washington, D.C. 20408
CRSI	Concrete Reinforcing Steel Institute	228 N. La Salle St. Chicago, IL 60601
CSLB	Contractors State License Board	9821 Business Park Dr. Sacramento, CA 95827
IEEE	Institute of Electrical and Electronics Engineers	445 Hoes Lane, Piscataway, NJ 08854
NACE	National Association of Corrosion Engineers	1440 South Creek Dr. Houston, TX 77084
NFPA	National Fire Protection Agency	Battery March Park Quincy, MA
NSF	National Sanitation 130140 Foundation 48113	P.O. Box Ann Arbor, MI
SSPC	Steel Structures Painting Council	4400 Fifth Ave. Pittsburgh, PA 1521
SSPWC	Standard Specifications for Committee Public Works Construction General (Greenbook)	Joint Cooperative c/o Associated Contractors of California 1255 Corporate Center Dr., Suite 100 Monterey Park, CA 91754
UBC	Uniform Building Code	International Conference of Building Officials 5360 Workman Mill Rd.

		Whittier, CA 90601
UNI-B	Uni-Bell PVC Pipe Association	2655 Villa Creek Dr., Ste. 155 Dallas, TX 75234
UPC	Uniform Plumbing Code	International Conference of Plumbing and Mechanical Officials 20001 E. Walnut Dr. South Walnut, CA 91789

1.06 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

A. Without limiting the generality of other requirements of the specifications, all Work specified herein shall conform to or exceed the requirements of all applicable codes and the applicable requirements of the following documents to the extent that the provisions of such documents are not in conflict with the requirements of these Specifications nor the applicable codes.

B. References herein to "Building Code" or UBC shall mean the Uniform Building Code of the International Conference of Building Officials (ICBO). The latest edition of the code as approved and used by the local agency as of the date of award, as adopted by the agency having jurisdiction, shall apply to the Work herein, including all addenda, modifications, amendments, or other lawful changes thereto. The UBC is hereby incorporated in and made a part of these Contract Documents, to the extent of the applicable references thereto.

C. No provisions of any referenced standard specification, manual or code, whether or not specifically incorporated by reference in the Contract Documents, shall be effective to change the duties and responsibilities of the Owner, Engineer, or Contractor from those set forth in the Contract Documents. Nor shall they be effective to assign to the Engineer any duty of authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of the Contract Documents.

D. In case of conflict between codes, reference standards, drawings and the other Contract Documents, the most stringent requirements shall govern. All conflict shall be brought to the attention of the Engineer for clarification and directions prior to ordering or providing any materials or labor. The Contractor shall bid the most stringent requirements.

E. Applicable Standard Specifications: The Contractor shall construct the Work specified herein in accordance with the requirements of the Contract Documents and the referenced portions of those referenced codes, standards, and specifications listed herein.

F. References herein to “SSPWC” or “Green Book” shall mean “Standard Specifications for Public Works Construction,” latest addition, including the County of San Diego Regional Supplement Amendments as applicable to the agency of jurisdiction.

G. References to "San Diego Regional Standard Drawings" shall mean the San Diego Regional Standard Drawings, latest edition, including all current supplements, regional supplements, addenda, and revisions thereof.

H. Reference to Standard Specifications or Standard Drawings shall mean the standard specifications or drawings of the District including all current supplements, addenda, and revisions thereof.

I. References herein to "Cal-OSHA" shall mean State of California, Department of Industrial Relations, Construction Safety Orders, as amended to date, and all changes and amendments thereto which are effective as of the date of construction.

J. References herein to "OSHA Regulations for Construction" shall mean Title 29, Part 1926, Construction Safety and Health Regulations, Code of Federal Regulations (OSHA), including all changes and amendments thereto.

K. References herein to "OSHA Standards" shall mean Title 29, Part 1910, Occupational Safety and Health Standards, Code of Federal Regulations (OSHA), including all changes and amendments thereto.

1.07 TRADE NAMES AND ALTERNATIVES

A. For convenience in designation in the Contract Documents, materials to be incorporated in the Work may be designated under a trade name or the name of a manufacturer and its catalog information. The use of alternative material which is equivalent in quality and of the required characteristics for the purpose intended will be permitted subject to the following requirements:

5. The burden of proof as to the quality and suitability of such alternative equipment, products or other materials shall be upon the Contractor.

6. The Engineer will be the sole judge as to the comparative quality and suitability of such alternative equipment, product or other materials and its decision shall be final.

B. Wherever the name or the name and address of a manufacturer or distributor is given in the Contract Documents for a product or other material, or if any other source of a product or material is indicated therefore, such information is given for the convenience of the Contractor only and no limit, restriction or direction is indicated or intended thereby, nor is the accuracy or reliability of such information guaranteed. It shall be the responsibility of the Contractor to determine the accurate identity and location of any such manufacturer, distributor or other source of any product or material called for in the Contract Documents.

C. The Contractor may offer any material, process or equipment which it considers equivalent to that indicated. Unless otherwise authorized in writing by the Engineer, submission of data substantiating a request for a substitution of “an equal” item shall be submitted after bid opening and prior to 60 days after award of the Contract. The Contractor, at its sole expense, shall furnish data concerning items it has offered as equivalent to those specified. The Contractor shall provide any materials as required by the Engineer to determine that the quality, strength, physical, chemical, or other characteristics, including durability,

finish, efficiency, dimensions, service and suitability are such that the item(s) will fulfill the intended function(s).

D. Installation and use of a substitute item shall not be made until approved by the Engineer. If a substitute offered by the Contractor is found to be not equivalent to the specified material, the Contractor shall furnish and install the specified material.

E. The Contractor's attention is further directed to the requirement that its failure to submit data substantiating a request for a substitution of an "equivalent" item within said period prior to and after the award of the contract, shall be deemed to mean that the Contractor intends to furnish one of the specific brand-named products named in the specification, and the Contractor does hereby waive all rights to offer or use substitute products in each such case. Wherever a proposed substitute product has not been submitted within said period, or wherever the submission of a proposed substitute product fails to meet the requirements of the specifications and an acceptable resubmittal is not received by the Engineer within said period, the Contractor shall furnish only one of the products originally named in the Contract Documents.

1.08 PROPOSED SUBSTITUTES OR “OR EQUAL” ITEM

The Contractor shall conform to the requirements of this section and that of Section 00700 General Conditions, Article 9.4, of these Specifications. In the event of a conflict, the requirements of Section 00700 shall take precedence.

A. Whenever reference to a specific brand name is made in the Contract Documents, it is illustrative and to be construed as a term of specification which describes a component that has been tested or evaluated by the District as best meeting the specific operational, design, performance, maintenance, quality, service and/or reliability standards and requirements of the District, thereby incorporating these requirements by reference within the specifications, and shall be deemed to be followed by the word ”or equal.” A listing of materials is not intended to be comprehensive, or in order of preference. The Contractor may offer any material, process, or equipment considered to be equivalent to that indicated. Materials, equipment, or service of other suppliers may be accepted if sufficient information is submitted by the Contractor to allow the Engineer to determine that the material or equipment proposed is equivalent or equal to that named, subject to the following requirements:

1. It shall be the sole responsibility of the bidder to provide at bidder's expense any product information, test data and other information the District may require to fully evaluate the acceptability of the offered substitute. Where appropriate, independent testing including destructive testing or evaluation at qualified test facilities at bidder's expense may be required as a condition of acceptance. Exceptions to the foregoing are permissible for procurement for replacement parts, or for testing and evaluation purposes or where compatibility with existing District equipment and/or facilities is mandated.

2. The Engineer will be the sole judge as to the type, function, and quality of any such substitute and the Engineer's decision shall be final.

3. The Engineer may require the Contractor to furnish at the Contractor's expense additional data about the proposed substitute.

4. The District may require the Contractor to furnish at the Contractor's expense a special performance guarantee or other surety with respect to any substitute.

5. Acceptance by the Engineer of a substitute item proposed by the Contractor shall not relieve the Contractor of the responsibility for full compliance with the Contract Documents and for adequacy of the substitute.

6. The Contractor shall be responsible for resultant changes including design and construction changes and all additional costs resulting from the changes which the accepted substitution requires in the Contractor's Work, the Work of its subcontractors and of other Contractors, and shall effect such changes without cost to the District.

B. The procedure for review of substitution request will include the following:

1. If the Contractor wishes to provide a substitute item, the Contractor shall make written application to the Engineer on the "Substitution Request Form." The substitution request form, along with all descriptive and technical information normally required for an item's approval, shall be submitted to the Engineer following the standard submittal process.

2. Unless otherwise provided by law or authorized in writing by the Engineer, the "Substitution Request Form(s)" shall be submitted within the thirty-five (35) day period after issuance of the Notice to Proceed.

3. Wherever a proposed substitute item has not been submitted within said thirty-five (35) day period, or wherever the submission of a proposed substitute material or equipment has been judged to be unacceptable by the Engineer, the Contractor shall provide the material or equipment indicated in the Contract Documents.

4. The Contractor shall certify that the proposed substitute will adequately perform the functions and achieve the results called for by the general design, and be similar and of equal substance to that indicated, and be suited to the same use as that specified.

5. The Engineer will evaluate each proposed substitute and respond as to the substitution's acceptability within thirty (30) days of receiving complete information from the Contractor.

6. As applicable, no substitute item shall be ordered, installed or utilized without the Engineer's prior written acceptance of the Contractor's "Substitution Request Form."

7. The Engineer will record the time required, by the Engineer, in evaluating substitutions proposed by the Contractor and in making changes to the Contract Documents required by the substitution. Whether or not the Engineer accepts a proposed substitute, the Contractor may be required to reimburse the District for the charges of the Engineer for evaluating each proposed substitute at the discretion of the Engineer.

C. C. The Contractor's application using the "Substitution Request Forms" shall contain the following statements and information which shall be considered by the Engineer in evaluating the proposed substitution:

1. The evaluation and acceptance of the proposed substitute will not prejudice the Contractor's achievement of substantial completion on time.

2. Whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents to adopt the design to the proposed substitute.

3. Whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty.

4. All variations of the proposed substitute from the items originally specified will be identified.

5. Documentation which includes experience and qualifications with respect to the ability of the proposed substitute manufacturer or supplier to provide the specified equipment, material, or service.

6. Available maintenance, repair, and replacement service will be indicated. The manufacturer shall have a local service agency (within 50 miles of the site) which maintains properly trained personnel and adequate spare parts and is able to respond and complete repairs within twenty-four (24) hours.

7. Itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including cost of redesign and claims of other Contractors affected by the resulting change.

1.09 ORDER OF PRECEDENCE

A. The Approved Plans, together with these Standard Specifications, shall govern the work to be done. Anything indicated in the Standard Specifications but not shown on the Approved

Plans, or shown on the Approved Plans but not indicated in the Standard Specifications, shall be of like effect as though shown or indicated in both. In resolving inconsistencies between the Approved Plans and the various sections of the Standard Specifications, the order of precedence shall be as follows:

1. Change Orders (Fully Executed)
2. Addenda
3. CEQA MMRP and/or certified CEQA documents (if applicable)
4. Permits
5. Special Conditions
6. Technical Specifications
7. Approved Plans (Contract Drawings)
8. Contract
9. General Conditions
10. Instructions to Bidders
11. Notice Inviting Bids
12. Contractor's Bid Forms
13. District Standard Specifications and Drawings
14. Approved Materials Lists
15. Standard Specifications for Public Works Construction (Green Book) (Sections 1-9 excluded)
16. Standard Plans for Public Works Construction
17. Applicable Local Agency Standards and Specifications
18. General Specifications (Standard Specifications Section 1)
19. Reference Documents

B. Figure dimensions on drawings shall take precedence over scale dimensions. Detailed drawings shall take precedence over general drawings. The Contractor shall immediately notify the DISTRICT if any conflict, inconsistency, omission, error, or ambiguity is discovered between the Approved Plans and the various sections of the Standard Specifications.

PART 2 - MATERIALS (NOT USED)

PART 3 - EXECUTION

3.01 EXAMINATION OF APPROVED PLANS, SPECIFICATIONS, AND SITE

A. The Contractor shall carefully examine the site of the proposed work, the Approved Drawings, the Specifications, and all other pertinent documents. Contractor shall be

satisfied as to the character, quality, and quantities of work to be furnished, and as to the requirements of the Approved Plans and these Standard Specifications. The DISTRICT will not be liable for any loss sustained by the Contractor as a result of any variance between conditions as shown on the Approved Plans and the actual conditions revealed during the progress of the work or otherwise.

B. Ascertain suitability of native soil for backfill before submitting bid. If native soil is found to be unsuitable, provide suitable material for meeting compaction requirements at no additional cost to District.

C. Items furnished shall be capable of fulfilling their intended purpose in environment in which they are installed. Allow for local temperature extremes, climactic conditions and corrosive environments where necessary to ensure proper functioning of furnished products.

3.02 QUALITY OF WORK AND MATERIALS

A. The work shall be performed in a thorough, worker-like manner in accordance with the Approved Plans and these Standard Specifications. All work shall conform to the lines and grades shown on said plans.

B. At least one member of the Contractor's workforce who is thoroughly familiar with the specified requirements of work and who is completely trained and experienced in the construction skills necessary for satisfactory completion of the work shall be present at the site, directing the work, at all times.

C. Adequate number of skilled workers and sufficient and appropriate equipment shall be present at the site prior to commencing daily construction operations.

D. The Engineer shall inform the Contractor if any person in the employ of the Contractor fails to or refuses to comply with the requirements of these Specifications or appears to the Engineer to be incompetent or unfit, or acts in a disorderly, improper or unsafe manner. It shall be the Contractor's responsibility to dismiss any such person from the work site or take any other action deemed appropriate by the Contractor.

E. All equipment, materials, and supplies to be incorporated in the work shall be new. All equipment, material and supplies shall be produced in a good and worker-like manner. Materials to be used within the scope of work on the project shall be those listed in the current Approved Materials List. When the quality of a material, process, or article is not specifically set forth in the Approved Materials List, the Approved Plans, or the Specifications, the best available quality of the material, process, or article shall be provided.

F. The Contractor may offer as substitution any material, process, or article substantially equal or better in every respect to that so indicated or specified; provided, however, that if the material, process, or article offered by the Contractor is not, in the opinion of the DISTRICT, substantially equal or better in every respect to that specified, then the Contractor must furnish the material, process, or article specified or one that in the opinion of the DISTRICT is substantially equal or better in every respect.

G. Carefully lay out work in advance to minimize cutting, channeling, chasing or drilling of structural pads or elements. Cuts, channeling, drilling, or welding required to accommodate mechanical or electrical equipment shall be reviewed in advance with DISTRICT. Do not begin such work until notified by DISTRICT. Repair damage to structures, piping equipment or finishes using skilled workers of appropriate trades.

H. Relocations or adjustment of existing facilities needed to facilitate construction must be approved in writing by the DISTRICT and subsequently relocated or adjusted by the Contractor as directed. If existing items are lost or damaged during construction, replace with new items of equal or better quality.

I. Make field measurements needed to fabricate and install Work before ordering or beginning work. Make minor changes in alignments and dimensions as needed to remedy or avoid utilities and structural conflicts.

J. Install products according to manufacturer's installation and warranty requirements. Manufacturers requirements for installation, application, connection, erection, maintenance, operating, cleaning, conditioning and startup of products shall be strictly followed.

K. Products shall be installed by the Contractor at the location shown on the Plans and Submittals.

L. Install products to tolerances recommended by manufacturer. Unless otherwise shown, install equipment true and level, using precision gauges and levels.

M. Refer variances between manufacturer's installation instructions and Contract Documents to the DISTRICT.

N. Construct walls, floors and flatwork plumb, straight, level, square and true. Acceptable deviations from plumb or level shall not exceed 1/4 inch in any 32 inch section. Flatwork shall not deviate from plan elevation by more than 3/4 inch at any location.

O. Welds, unless otherwise shown, shall be continuous, watertight, and conforming to Structural Welding Code of American Welding Society. Welds shall be free of sharp points or edges.

P. Exposed surfaces shall be finished in appearance. Grind smooth exposed welds. Round or chamfer corners of exposed structural shapes for personnel protection.

Q. Roofing systems shall be leak free, demonstrated by a 1-hour hose test.

R. Prime and paint exposed surfaces of ferrous products, piping, and conduit except for stainless steel or galvanized or sherardized surfaces or unless otherwise shown. Clean painted surfaces and touch up bare or marred spots with finish to match factory finish.

S. Paint and coat in workmanlike manner so as to produce an even film of uniform thickness. Pay attention to edges, angles, flanges, corners, crevices, and joints to ensure that they have been thoroughly cleaned and that they receive specified thickness of paint or coating. Finished surfaces shall be free from runs, drops, ridges, waves, shiners, laps, brush marks, and variations in color, texture and finish. The finish shall be so complete that addition of

another coat would not increase the finish. Apply coats so as to produce film of uniform thickness.

T. Repair damage to work that is not cause for rejection.

U. Repair, correct or replace Work failing tests or inspection. Repeat tests until results satisfy specifications. Repair damages resulting from tests.

V. Furnish mounts, guides, bearing plates, flanges, anchor and attachment bolts and screws, saddles, supports, pads and skids necessary to securely mount products and equipment.

W. Tighten bolts to manufacturers' specifications using torque wrenches. Unless otherwise directed, use lubricant such as Copperkote when making up bolts.

X. Manufacturer's instructions and warranty requirements for installation, application, connection, erection, maintenance, operating, cleaning and conditioning of products shall be strictly followed.

3.03 MATERIALS

A. All materials shall be new and unused, of the quality defined in these Standard Specifications, selected from the Approved Materials List, and approved by the DISTRICT Engineer. All materials to be used within a specific project and intended for equivalent uses shall be identical as to manufacturer and model number. Materials not identical as to manufacturer and model number to those approved by the DISTRICT Engineer, materials that are damaged, or materials that are otherwise unacceptable to the DISTRICT Engineer shall be rejected and immediately removed from the job site.

B. All materials shall be of the makes and models tested and approved for use. Selections shall be made from the current Approved Materials List. It is the Contractor’s responsibility to verify that materials received for the job conform to the current Approved Materials List.

C. Products on the Approved Materials List may be disqualified at any time if the quality of the product is no longer judged as acceptable by the Engineer or if a higher-quality product becomes available.

D. Job-specific approval of materials not shown on the Approved Materials List is solely at the discretion of the DISTRICT Engineer, and materials so approved shall not be construed as approved for general use. For job-specific consideration of materials not shown on the Approved Materials List, the shop drawing procedures outlined in the standard specifications shall be followed.

E. Products and workmanship shall match Contractor's submittals as reviewed by DISTRICT's Representative.

F. Connections and mountings required to install products shall comply with connections and mountings shown in the Contract Documents and Submittals on a location-specific basis. Do not assume that approval of connections or mountings at a specific location constitutes approval of same at all locations.

G. Materials and materials sources shall be reviewed by DISTRICT at least three days before use of materials in Work. However, information for materials and materials sources shall be submitted in accordance with Section 01300 of these Specifications.

H. Conform to federal, state and local regulations governing VOC content, percentage solids by volume, and other paint and solvent properties.

I. Similar items on project shall be products of same manufacturer.

J. Corresponding parts of identical products shall be interchangeable.

K. Materials for a complete paint or sealant system, including primer, finish coats, thinners, cleaners and drying agents, and other additives shall be the end products of one manufacturer to ensure product compatibility and unit responsibility.

L. Design and fabrication of products shall ensure products withstand stresses and loads which may occur during testing, installation, start-up and normal operation.

3.04 DELIVERY, STORAGE AND HANDLING

A. Deliver products to jobsite in manufacturer's original, unopened, labeled packaging. Tag or label packages as needed to identify contents and name of the equipment.

B. Only products of approved manufacturers shall be delivered and stored at the site.

C. Store materials in a protected area at a temperature between 35°F and 110°F.

D. Store products so as to preserve their quality and fitness for the Work. All products and equipment to be incorporated in the Work shall be available for prompt inspection. Contractor shall be responsible for damage or loss to products until Final Acceptance.

E. Protect products against moisture, extreme temperatures, dust, debris, tampering, vandalism, ultraviolet radiation, or damage from improper handling, storage, or exposure to adverse elements. Protect exposed metals from rust and corrosion even though they will be sandblasted or otherwise cleaned before painting.

F. Openings on valves and equipment shall be covered, plugged or capped.

G. Stringing of pipe along right of way shall be done in a manner that will not interfere with free passage of vehicles and shall only be allowed if approved by the agency having jurisdiction.

H. Store items not designed for outdoor exposure off ground and under cover.

I. Handle products with care and using proper equipment according to manufacturer's recommendations. Lift large heavy items only at points designated by manufacturer. Do not drop, drag, bump or handle products in manner that causes bruises, cracks, scratches or other damage. Use padded slings and hooks for lifting as needed to prevent damage. Improper handling shall be cause to reject mishandled products.

J. Inspect each product item for damage, defects, completeness and correct operation before installing.

K. Notify DISTRICT in writing if delivered or stored product is damaged. Exterior surfaces of delivered items shall be in perfect unblemished condition. Do not repair damaged products without prior written approval.

L. Maintain records for DISTRICT's review of deliveries to show Contractor's order number, purchase order number and equipment number. Include labeling or shipping tag in records.

3.05 HOURS OF WORK

A. CONTRACTOR shall conduct all Work in accordance with the provisions as directed by the local Jurisdiction that the project is located in.

B. Exceptions to this Work schedule shall be only as approved in writing by the said Jurisdiction.

C. CONTRACTOR shall obtain special permission from City and DISTRICT to work on City or DISTRICT holidays.

D. Hours of work shall be 7:30 A.M. to 4:30 P.M. Overtime and shift work may be established as short-term procedure by Contractor with written notice to and written permission from Owner. No work other than overtime and shift work approved by Owner shall be done between the hours of 4:30 P.M. and 7:30 A.M., nor on Saturdays, Sundays, or Owner recognized holidays, except such work as is necessary for the proper care and protection of the Work already performed, except in case of emergency, and as specified herein. The Owner recognized holidays are as follows:

New Year’s Day
Martin Luther King Jr. Day
President’s Day
Memorial Day
Independence Day
GM Holiday (TBD)
Labor Day
Veteran’s Day
Thanksgiving Day
Day after Thanksgiving Day
Christmas Day

3.06 CONTRACTOR WORK AREA

A. The use of the project area will not be available beyond the limits of the project site as identified on the drawings or in accordance with approved traffic control permits. The CONTRACTOR must operate entirely within the limits of the project site. No equipment or materials may be parked or stockpiled outside the project site or CONTRACTOR staging areas. The CONTRACTOR is responsible for locating and securing legal storage and staging areas. The CONTRACTOR shall provide a storage and staging plan to the DISTRICT, including written permission from legal owner of property stating they are allowing the CONTRACTOR to use their property.

B. It shall be understood that responsibility for protection and safekeeping of equipment and materials on or near the site will be entirely that of the CONTRACTOR and that no claim shall be made against the DISTRICT or authorized representatives by reason of any act. It shall be further understood that should any occasion arise necessitating access to the sites occupied by these stored materials or equipment, the Engineer shall direct the CONTRACTOR owning or responsible for the stored materials and equipment to immediately move the same. No materials or equipment may be placed upon the property of the DISTRICT other than the designated areas on the Drawings unless the DISTRICT has agreed to the location contemplated by the CONTRACTOR to be used for storage.

3.07 INDEMNIFICATION

A. CONTRACTOR hereby releases and agrees to indemnify, defend, hold harmless the DISTRICT for any and all damage to persons or property or wrongful death regardless of whether or not such claim, damage, loss or expense is caused in whole or in part by the negligence, active or passive, of the DISTRICT, excepting only the sole negligence of DISTRICT to the fullest extent permitted by law. Such indemnification shall extend to all claims, demands, actions, or liability for injuries, death or damages occurring after completion of the project, as well as during the work's progress. CONTRACTOR further agrees that it shall accomplish the above at its own cost, expense and risk exclusive of and regardless of any applicable insurance policy or position taken by any insurance company regarding coverage.

B. CONTRACTOR shall defend, indemnify and hold the DISTRICT, harmless against any and all claims by any parties arising from, or related to, any and all damages, including legal costs and attorney's fees, resulting from interference with, interruption of, damage to, or any and all injuries which result from damage caused to subsurface installation, which is unforeseen, excepting only the sole negligence of DISTRICT to the fullest extent permitted by law.

3.08 JOB SAFETY AND HEALTH REGULATIONS

A. CONTRACTOR acknowledges responsibility for job-site safety and acknowledges that the Engineer will not have any such responsibility. To the fullest extent permitted by law the CONTRACTOR shall indemnify, defend and hold harmless DISTRICT from and against all claims, damages, losses and expenses, including but not limited to attorney fees and claim costs, arising out of or resulting from performance of work by the CONTRACTOR, its subcontractors, or their agents and employees, which results in damage to persons or property including wrongful death regardless of whether or not such claim, damage, loss or expense is caused in whole or in part by the negligence, active or passive, of DISTRICT, excepting only the sole negligence of DISTRICT.

B. All necessary machinery guards, railings, and other protective devices shall be provided as specified and/or required by the State of California Division of Industrial Safety and the Occupational Safety and Health Administration. It is accepted that all fabricators, electrical and machinery manufacturers and other equipment suppliers are conversant with such regulations and they shall be responsible for the industrial safety aspects of such equipment. All equipment shall comply with all rules and regulations of the Safety Orders of the State of California Division of Industrial Safety and all local building, plumbing,

and electrical codes and ordinances. Safety guards shall be easily removed to permit inspection, removal and repair of the moving parts.

C. The Contractor shall comply with Safety and Health Regulations for Construction, promulgated by the Secretary Standards Act, as set forth in Title 9 C.F.R. Copies of these regulations may be obtained from Labor Building, 14th and Constitution Avenue NW, Washington, DC 20013.

D. The Contractor shall also comply with the provisions of the Federal Occupational Safety and Health Act, as amended, and with all applicable State of California, Department of Industrial Relations, Construction Safety Orders (Cal-OSHA) requirements.

3.09 INSPECTION

A. Notify DISTRICT of time and place of shop tests five working days before they begin. Complete manufacturing operations, checks, adjustments, and tests before factory inspection.

B. The DISTRICT REPRESENTIVE will inspect products after delivery and throughout construction process. Products will be subject to rejection at any time on account of failure to meet Contract Documents even though samples may have been accepted as satisfactory at place of manufacture.

C. Before backfilling, request inspection by the Engineer to verify proper installation of buried work.

D. Before finishing, request inspection by the DISTRICT REPRESENTATIVE to verify that no surfaces to receive product have defects or errors which could result in poor or potentially defective application or cause latent defects in workmanship.

3.10 FIELD QUALITY CONTROL

A. Maintain complete set of Contract Documents at jobsite field office or superintendent's truck at all times.

B. Frequency of sampling and testing shall be as shown and shall be performed at such other times as necessary to document contract compliance.

C. Notify the Engineer and regulating authorities three days before field tests.

D. Perform field tests in presence of the Engineer who will record results.

E. Repair damage to work that is not cause for rejection.

F. Repair, correct or replace work failing tests or inspection. Repeat tests until results satisfy specifications. Repair damages resulting from tests.

3.11 TESTING LABORATORY SERVICES

A. Where required by these specifications, the DISTRICT will hire an independent laboratory to perform testing and certify results. The Contractor shall provide labor, products, tools, instruments, water, and power as directed for sampling for required tests.

B. Tests of products shall follow commonly recognized standards of national technical organizations and specified sampling and testing methods.

C. The DISTRICT shall pay for all passing tests, the contractor shall pay for all failing tests, for quality assurance testing unless otherwise shown.

D. DISTRICT may test representative samples of each type and size of product furnished. Failure of samples to pass tests will be deemed sufficient cause to reject entire lot delivered.

3.12 CONSTRUCTION STAKING AND PRESERVATION OF MONUMENTS

A. Staking of the various public improvements required shall be performed by the Contractor's surveyor. Generally, stakes for alignment and grade shall be set at 25’ intervals. The survey shall conform to the lines, grades, and dimensions shown on the Approved Plans and shall be conducted by a surveyor licensed in the State of California. The DISTRICT shall give an account of the adequacy, readability, and frequency of the stakes provided and shall comment on any remedies required.

B. The Contractor shall preserve all monuments, benchmarks, survey marks, and stakes. In case of their removal or destruction by Contractor or its employees, agents or subcontractors, the Contractor shall be liable for the cost of their replacement.

3.13 ENVIRONMENTAL CONTROL

A. The Contractor shall abide by all applicable local, state, and federal regulations, and by the conditions of the Regional Water Quality Control Board.

B. The Contractor shall provide effective measures where necessary to prevent operations from producing dust in an amount damaging to property or causing a nuisance as determined by the DISTRICT. The Contractor shall be responsible for any damage due to dust originating from its operations.

C. The Contractor shall anticipate and correct any erosion problem arising from its operations.

3.14 CONNECTIONS TO EXISTING FACILITIES

A. Perform all construction necessary to complete connections and tie-ins toexisting facilities under DISTRICT observation.

B. Keep existing facilities in operation, unless otherwise specifically permitted in these Specifications or approved by the DISTRICT.

C. CONTRACTOR shall perform all construction activities so as to avoid interference with operations of the facility and the work of others.

D. CONTRACTOR shall provide sub-surface investigations for locating and field verifying all existing piping, structures and equipment affected by the work. All sub-surface investigations shall be performed by the CONTRACTOR at no additional cost to the DISTRICT. Delays in the work, as a result of insufficient sub surface investigations, will be solely the CONTRACTOR'S responsibility. No time extensions will be allowed for work that is delayed as a result of insufficient sub-surface investigations and field verification.

E. Insofar as possible, all equipment shall be tested and in operating condition before the final tie-ins are made to connect equipment to the existing facility.

F. CONTRACTOR shall carefully coordinate all work and schedules and shall provide DISTRICT written requests for all shutdowns in advance of the proposed shutdown for review and approval by the DISTRICT in accordance with DISTRICT System Shutdown Request procedures.

G. Submit detailed schedule of proposed connections, disconnections, and reconnections, including laterals, listing sequence and durations of all activities including shutdowns and tie-ins. The detailed schedule must be submitted by the CONTRACTOR and approved by the DISTRICT prior to submitting System Shutdown Request(s).

3.15 PROTECTION OF LANDSCAPING

A. The Contractor shall be responsible for the protection of all trees, shrubs, fences, and other landscape items adjacent to or within the work area, unless specific removals are indicated on the Approved Plans.

B. In the event of damage to landscape items, including the thickness of topsoil, the Contractor shall replace the damaged items in kind, in a manner satisfactory to the DISTRICT and the Developer.

C. When pipelines are proposed within planted or otherwise improved areas in public or private easements, the Contractor shall restore such areas to original condition after completion of the work.

D. When pipelines are proposed within unimproved areas, the ground surface shall be dressed smooth to the contour of the original ground and left in a neat, presentable condition, free of cleared vegetation, rubbish and other construction wastes. Rocks and clumps that cannot be readily covered by spreading shall be hauled away and disposed of by the Contractor.

E. Unimproved areas disturbed during construction of the pipeline shall be hydro seeded in accordance with these Standard Specifications.

3.16 PROTECTION OF PAVEMENT SURFACES

A. The CONTRACTOR shall exercise all necessary precautions so as not to damage any existing pavement surfaces. All paved areas including asphaltic concrete berms cut or damaged during construction shall be restored or replaced in accordance with the standard specifications.

3.17 PUBLIC UTILITIES

A. In case it should be necessary to relocate or temporarily maintain the property of any public utility or any other property, and it is understood that the cost of such relocation or temporary maintenance is not required to be borne by the owner of the utility or property, the Contractor shall bear all expenses incidental to the removal or temporary maintenance of such property in a manner satisfactory to said owner. It is understood that in such cases, the utility or property owner has the option of doing such work with his or her own forces or permitting the work to be performed by the Contractor.

B. The right is reserved to the State, County, City, DISTRICT, or utility owners to enter at any time upon any street, alley, right of way or easement for the purpose of making changes for maintenance or repairs to their property necessitated by the Contractor's work.

3.18 UTILITIES CROSSING WATER, RECYCLED WATER OR SEWER FACILITIES

A. Wherever new utilities cross under or over water, recycled water or sewer facilities, the minimum vertical separation shall be 300mm (12”) unless otherwise approved by the DISTRICT Engineer. All new utilities crossing under or over water, recycled water or sewer facilities shall remain exposed until inspected and approved by the DISTRICT Engineer. Wherever new utilities cross under or over water, recycled water or sewer facilities, backfill and compaction within the limits of the water, recycled water, or sewer facility trench width shall be in strict conformance with the backfill and compaction requirements specified herein.

3.19 HORIZONTAL SEPARATION OF UTILITIES PARALLELING WATER, RECYCLED WATER OR SEWER FACILITIES

A. Wherever new utilities parallel water, recycled water or sewer facilities, the minimum horizontal separation shall be such that 900mm (36”) of undisturbed soil separates adjacent trench edges, unless otherwise approved by the DISTRICT Engineer.

3.20 WATER AND POWER FOR CONSTRUCTION PURPOSES

A. Water for construction purposes:

1. All water used on the project shall be obtained from DISTRICT’s sources using a construction meter.
2. The construction meter and service connection shall be obtained from the DISTRICT. The Contractor shall make arrangements with the DISTRICT for payment of the deposit and installation of the meter.
3. The Contractor shall pay for all construction water used in accordance with DISTRICT’s Rules and Regulations.
4. Damage caused to the meter will be charged to the Contractor.
5. Water for construction purposes outside the DISTRICT’s service area shall be obtained from the DISTRICT within which the project lies.

B. Contractor shall make all arrangements for electrical power required during construction.

3.21 HAZARDOUS WASTE AND UNKNOWN PHYSICAL CONDITIONS

A. If conditions listed below are found during construction, or if any other conditions are found during construction that may be detrimental to the DISTRICT's facilities being constructed, or to the health and safety of the public, the Contractor shall promptly notify the DISTRICT.

B. Material that the Contractor or Engineer believes may be hazardous waste, as defined in Section 25117 of the Health and Safety Code and is thus required to be removed to a Class I, Class II, or Class III disposal site in accordance with the provisions of existing law. If such material is discovered, Contractor shall immediately cease work and shall not disturb the job site except as required to protect public safety.

C. Subsurface or latent physical conditions at the site differing from those indicated.

D. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided in the Contract.

E. The Contractor shall promptly inform the DISTRICT of any such conditions found during construction. The DISTRICT shall investigate the conditions, and if it finds that the conditions do materially differ from those shown or expected, or do involve material that may be hazardous waste, Contractor shall cease work in the impacted area. If material that may be hazardous waste is discovered, the Developer shall ensure that the appropriate government agencies are contacted prior to any further work being performed and that a solution is implemented.

3.22 WORK TO BE DONE

A. The work to be done consists of furnishing all materials, equipment, labor and all other items necessary for the construction and installation of a complete facility as shown on the Approved Plans and in accordance with these Standard Specifications. In some instances, the DISTRICT may furnish certain materials and services, which will be expressly called out on the Approved Plans.

B. The DISTRICT’s approval of the plans prepared by a Private Engineer denotes agreement with the plans as prepared and is not an acceptance of responsibility as to accuracy. The Private Engineer shall be responsible for any errors, coordination with other agencies/utilities and interpretation of plans. The intent is that the completed Work shall be in general conformance with the Approved Plans and in accordance with the requirements of these Standard Specifications.

3.23 CHANGES TO THE WORK

A. If the DISTRICT, due to conditions that change during the progress of the work, determines it impracticable for the Contractor to strictly comply with the Approved Plans or the Standard Specifications, the DISTRICT may prescribe a modification of requirements. The DISTRICT may at any time during the life of the project, by written order, make such

changes as it may find necessary in the design, line, grade, form, location, dimensions, plan or material of any part of the work originally specified or shown on the Approved Plans.

B. If such changes increase the cost of material, or work to be performed, the difference in cost shall be borne by the Developer. All changes so performed shall be at no cost to the DISTRICT.

C. The DISTRICT shall provide written authorization for all changes to the work.

D. The following procedure shall be followed for revisions or changes to the Approved Plans:

1. Prints showing proposed changes shall be submitted to the DISTRICT for review and approval.

2. If the changes will require an increase in bond amount, plans will be held until a new estimate has been prepared and a new bond has been placed with the DISTRICT.

3. If the changes do not affect the bonding amount, as determined by the DISTRICT Engineer, the plans shall be reviewed and upon approval, the Private Engineer shall be notified to make the corrections on the original drawings. A print of the revised plan shall then be submitted to the DISTRICT for final checking and approval. A signature block shall be added to the plans to indicate approval of changes made.

4. After these steps have been taken, the Contractor may proceed with the revised construction.

3.24 RECORD DRAWINGS

A. During the course of the work, the Contractor shall keep accurate legible, and updated records of the changes made to the work. The changes may be dictated by field conditions, unknown obstructions, design oversight, or other circumstances determined to be in the best interest of the DISTRICT.

B. Refer to Specification Section 01720 Record Documents for additional detail.

3.25 CLEANING DURING CONSTRUCTION

A. Requirements of Regulatory Agencies:

1. In addition to the requirements herein, the CONTRACTOR shall maintain the cleanliness of the work and surrounding premises within the work limits so as to comply with federal, state, and local fire and safety laws, ordinances, codes and regulations.

2. The CONTRACTOR shall comply with all federal, state and local anti-pollution laws, ordinances, codes and regulations when disposing of waste materials, debris and rubbish.

B. Scheduling of Cleaning and Disposal Operations:

1. The CONTRACTOR shall schedule all clean-up and disposal operations so that dust, wash water or other contaminants generated during such operations do not damage or mar painted or finished surfaces.

2. The CONTRACTOR shall prevent accumulation of dust, dirt, debris, rubbish and waste materials on or within the work or on the premises surrounding the work.

C. Waste Disposal:

1. The CONTRACTOR shall legally dispose of all waste materials, surplus materials, debris and rubbish off the site.

2. The CONTRACTOR shall not burn or bury rubbish and waste materials on site.

3. The CONTRACTOR shall not dispose of volatile or hazardous wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.

4. The CONTRACTOR shall not discharge wastes into streams or waterways.

D. Materials:

1. The CONTRACTOR shall use only cleaning materials recommended by manufacturer of surface to be cleaned.

2. The CONTRACTOR shall use each type of cleaning material on only those surfaces recommended by the cleaning material manufacturer.

3. The CONTRACTOR shall use only materials, which will not create hazards to health or property.

E. Maintain areas covered by Contract, adjacent properties, and public access roads. Keep these areas free from waste, debris and rubbish caused by construction.

F. Sweep streets daily using self-loading motor sweeper with spray nozzles. If streets are kept clean, a lesser frequency may be approved by DISTRICT.

G. Conduct cleaning and disposal to comply with local ordinances and antipollution laws. Contractor shall obtain a NPDES permit as required by the DISTRICT Standard Specifications and Drawings.

H. Provide containers for collection and disposal of waste materials, debris, and rubbish.

I. Clean public access roads to site. Remove material falling from haul trucks.

J. Clean up and Dust Control. Throughout all phases of construction, including suspension of work, and until final acceptance, the CONTRACTOR shall keep the site clean and free from rubbish and debris. The CONTRACTOR shall also abate dust nuisance by cleaning, sweeping and sprinkling with water, or other means as necessary. The use of water resulting in mud on public streets will not be permitted as a substitute for sweeping or other methods.

K. The CONTRACTOR shall furnish and operate a motorized vacuum sweeper with spray nozzles at least once each workday for the purposes of keeping paved areas acceptably clean wherever construction activity, including restoration, is incomplete.

3.26 SCHEDULING OF CLEANING AND DISPOSAL OPERATIONS

B. The Contractor shall schedule cleaning and disposal operations to prevent the accumulation of dust, debris or waste materials on or within the Work or the premises surrounding the Work.

C. The Contractor shall schedule all cleaning and disposal operations so that dust, wash water or other contaminants generated during such operations do not damage or mar finished surfaces.

D. The Contractor shall perform the following during construction:

1. Keep the Work and the areas within the project limits free of accumulations of dust, waste materials, debris and rubbish.
2. Keep exposed soil areas wetted down to prevent the generation of dust.
3. Provide suitable containers for the storage of waste materials and debris.
4. Dispose of waste and debris off site at legal disposal areas.

E. The Contractor shall perform the following upon project completion and shall continue cleaning operations until final acceptance of the project by the District:

1. Remove and dispose of all excess or waste materials, debris, rubbish, and remove temporary facilities from the site.
2. Repair pavements, roads, hardscape, sod and all other improved or unimproved areas affected by construction operations to restore them to their original condition or to the minimum condition specified.
3. Remove spatter, grease, stains, fingerprints, dirt, dust, labels, packing materials and other foreign items from interior and exterior surfaces, equipment, signs and lettering.
4. Repair, patch and touch up chipped, scratched, dented or otherwise marred surfaces to match the specified finish.
5. Remove paint, clean and restore all equipment and material nameplates, labels and other identification markings.
6. Wash and shine glazing and polished surfaces and clean all floors, slabs, pavements and ground surfaces.

3.27 FINAL CLEANING

A. Restore construction areas to preconstruction conditions after completion of Work and prior to final inspection.

B. Repair pavement, roads, sod, and all other areas affected by construction operations and restore them to original condition or to minimum condition specified by the DISTRICT.

C. Restore lines and grades of areas used for earthwork storage.

D. Clean, sweep, and wash Work and equipment including finishes.

E. Remove grease, dust, dirt, stains, labels, fingerprints and foreign materials from sight-exposed interior and exterior finished surfaces. Polish surfaces so designated.

F. Repair, patch and touch up marred surfaces to specified finish to match adjacent surfaces.

G. Broom-clean paved surfaces.

H. Rake-clean other surfaces of grounds.

I. Remove from DISTRICT's property temporary structures and materials, equipment and appurtenances not required as part of, or appurtenant to, completed Work.

J. After Work is complete, loose concrete, lumber, wire, aggregate or rock piles, reinforcing bars, rubbish, debris and materials not incorporated in Work shall be removed from the site. Remove excess pointing mortar materials and other debris within pipes.

K. The CONTRACTOR shall maintain cleaning until acceptance and occupation by DISTRICT.

3.28 PROJECT CLOSEOUT AND FINAL ACCEPTANCE

A. The DISTRICT’s Board of Directors or designee shall be responsible for final acceptance of all projects. The following items of work shall be completed prior to final acceptance by DISTRICT:

1. The project has been completed in accordance with the Approved Plans, the job specifications and these Standard Specifications.
2. Final inspection has been performed by DISTRICT. Any “punch list” items generated by preliminary inspection shall have been completed.
3. Record drawings reflecting any changes to the project have been submitted to the DISTRICT’s Inspection Department in accordance with these Standard Specifications.
4. A Soils Test Report has been submitted to the DISTRICT in accordance with Section 02223 of these Standard Specifications.
5. All costs and fees relevant to the work have been paid to DISTRICT by the Developer.
6. All aspects of the Construction Agreement have been completed to the satisfaction of the DISTRICT.

B. Valve box cover elevations are not shown on drawings. Determine and set cover elevations in field so that finished rim elevations are flush with finished pavement where directed by DISTRICT.

C. Spare parts required shall be delivered in manufacturer's original containers labeled to completely describe contents and equipment for which it is furnished.

D. Following final acceptance by the DISTRICT, the DISTRICT will prepare a Notice of Completion and will have such Notice recorded by the County Recorder.

E. Refer to Specification Section 01700 Project Closeout for additional detailed closeout procedures.

3.29 WARRANTY

A. One year warranty inspection shall be conducted prior to release of bonds. Any work failing to comply with specifications or performance standards stated in manufacturers submittals or printed promotional literature will at that time be tagged as defective and scheduled for repair. Repair all defective work in strict accordance with the Contract Documents and to the satisfaction of the DISTRICT.

1. DISTRICT will establish inspection date and will notify Contractor at least 30 days in advance.

2. Warranty Inspection Report will be prepared by DISTRICT and delivered to Contractor. It will set forth the number and type of failures observed and the names of persons making the inspection.

3. Repairs shall proceed promptly. Upon completion of inspection and receipt of Inspection Report, DISTRICT will establish a date for Contractor to proceed with remedial Work. Delay on the part of the Contractor to proceed with remedial work on schedule shall constitute a breach of this Contract. In such case, DISTRICT may proceed to have defects remedied as outlined in Contract Documents.

B. Costs of warranty inspection and repair shall be borne by Contractor, who shall include an appropriate amount for testing and repair in his bid. No additional allowance will be paid by DISTRICT for Warranty Inspection and repairs.

C. The work shall be guaranteed against failure due to defective materials or workmanship for a period of one (1) year from the recording date of the Notice of Completion. The one-year warranty period shall not, in any way, affect the liability of any party for latent or patent defects allowed for under State law.

D. All repairs shall be made pursuant to the Development Agreement with the DISTRICT and in accordance with the DISTRICT's Rules and Regulations and current Standard Specifications.

3.30 WARRANTY INSPECTION

A. The DISTRICT will perform a warranty inspection prior to the expiration of the one-year warranty period. The CONTRACTOR will be notified in writing of any deficiencies revealed by this inspection. The warranty bond will not be released until the required repairs are completed. If the warranty inspection is satisfactory, the DISTRICT will release the warranty bond at the end of the one-year warranty period.

END OF SECTION

SECTION 01043

COORDINATION WITH DISTRICT OPERATIONS

PART 1 - GENERAL

1.01 DESCRIPTION

A. This section describes the requirements for coordination with the District for the construction of the work including requirements for developing a construction sequence and schedule, coordinating and scheduling all work involving interruption of service to District facilities or other public facilities, and maintaining service to existing facilities or systems as required.

1.02 ORDER OF THE WORK

A. The work shall be carried on at such places on the project and in such order or precedence as may be found necessary by the Engineer to expedite the completion of the project. After work has begun on any portion, heading, or designated part of the project, it shall be carried forward to its final completion.

1.03 SHUTDOWNS

A. Proposed shutdowns of existing public water mains must be indicated on the Contractor's construction schedule. All valve operations required for shutdowns are to be performed by District Staff. Shutdowns are subject to some flow-by through closed valves that may require the Contractor to manage some nuisance water during the required tie-ins.

1. Follow phasing as described in contract plans

2. All water shutdowns/outages must be scheduled to take place on Wednesdays, contractor will be responsible to plan their work accordingly.

B. Proposed shutdowns of existing private water service connections must be indicated on the Contractor's construction schedule. Shutdowns of individual properties are limited to a single shutdown of a maximum 2-hour duration and are to be arranged with each private property owner at a mutually convenient time. Refer to Section 01015 and 15041 for special provisions applicable to connections, flushing, testing, and disinfection of the new service laterals.

C. The Contractor shall make specific written requests for all shutdowns fourteen (14) calendar days in advance of the proposed shutdown. The written request shall include an approved detailed plan of the Contractor's proposed activities including schedule, manpower, equipment, materials, methods, sequence, and the estimated shutdown duration which will be utilized to perform the required work during the proposed shutdown. The Contractor shall revise the proposed plan to the satisfaction of the District if, in the opinion of the District, the Contractor's proposed plan is insufficient to demonstrate that the proposed work can be successfully completed during the shutdown period.

1.04 CONSTRUCTION SEQUENCE

A. Work under the Contract shall be scheduled and performed in such a manner as to result in the least possible disruption to the operation of the existing facilities. At the sole discretion of the Engineer, deviation from the proposed sequence may be permitted if an alternate sequence or techniques and methods proposed by the Contractor will reduce the durations of service interruptions or will improve the operation of the existing system upon the concurrence of the Engineer.

B. The Contractor shall coordinate all connections to existing mains and/or water meters with the District. The Contractor shall install all highline piping necessary, at no additional cost, to maintain continuity of service where service interruptions will exceed 8 hours in duration unless otherwise approved by the District. If temporary highlines are not specified or shown on the Drawings, but will be required based on the Contractor's means and methods of construction and the estimated duration of the shutdown, then the Contractor shall prepare and submit a plan for the proposed highlining in accordance with Section 01300.

C. The Contractor shall adhere to the following general construction phasing guidelines, in order of precedence, for the performance of the Work. Deviations from these guidelines shall be submitted to the Engineer per Section 01300 and shall not be carried out until written approval is obtained by the Contractor from the Engineer.

1. Secure permits and approvals from agencies which have jurisdiction over the Work area.

2. Conduct surveys, construction staking, and request utility mark-outs. Pothole all existing utilities that cross or parallel (within 5 feet horizontally) the proposed centerline of construction or outermost limits of new structures, including connection points to existing pipelines. Provide potholing results to the District and advise the District of any discrepancies at connection points, or at crossing or paralleling utilities.

3. Restore public and private improvements damaged by the Contractor's operations and restore fully the site to the condition existing prior to the start of work.

END OF SECTION

SECTION 01201

PRECONSTRUCTION CONFERENCE

PART 1 – GENERAL

1.01 DESCRIPTION

A. A Preconstruction Conference will be held after execution of the Contract and prior to the start of construction. The District will fix the date, time and location of the meeting in accordance with requirements of the General Conditions.

B. The Resident Engineer or Construction Manager shall prepare agenda, preside at meeting, and prepare and distribute a transcript of proceedings to all parties.

C. The Contractor shall provide data required, contribute appropriate items for discussion and be prepared to discuss the agenda items. Shop drawings shall be submitted following the Notice to Proceed (NTP).

1.02 REQUIRED ATTENDANCE

A. Contractor and major Subcontractors.

B. District Representative.

C. Resident Engineer or Construction Manager or Inspector.

D. Representatives of government or utility agencies having any degree of control or responsibility, if available.

E. Engineer's design subconsultants, when necessary.

1.03 AGENDA

A. The agenda will include, but is not limited to, the following:

1. Designation of responsible District, Contractor, and Subcontractor personnel and communication procedures

2. Construction Schedule (To be provided by the Contractor).

3. Schedule of Values (To be provided by the Contractor)

4. Conformed Contract Documents

5. Requirements for copies of the Contract Documents

6. Coordination with the District, affected utility companies, municipal agencies, or other contractors

7. Contractor(s) responsibility for safety and first aid procedures and emergency contact personnel

8. Construction permits requirements and procedures

9. Traffic Control Plan

10. Use of premises

11. Access and rights-of-way to be furnished by the District

12. Private Property Coordination

13. Field Office

14. Security and housekeeping

15. Processing of Shop Drawings and Submittals

16. Processing of field decisions and Change Orders

17. Processing and Schedule of Payments

18. Record Drawings

19. Any other administrative or general matters as necessary

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01300

SHOP DRAWINGS AND SUBMITTALS

PART 1 - GENERAL

1.01 GENERAL

A. All Contractor submittals shall be submitted to the District in accordance with Section 00700, General Conditions and the requirements herein.

B. Unless otherwise noted, within fifteen (15) days after the date of commencement as stated in the Notice to Proceed, the Contractor shall submit the following items to the District for review:

1. A list of submittals with scheduled submission dates. This list shall include specification section number, description of the submittal, scheduled submission date, and anticipated approval date. The Contractor's schedule shall be based on a minimum of one resubmittal for each shop drawing and sample.

2. A list of all permits and licenses the Contractor is required to obtain, indicating the agency required to grant the permit, the expected date of submittal for the permit, and required date for receipt of the permit.

C. The Contractor is responsible for identifying and delivering all submittals and/or permits required by the Contract Documents.

1.02 SUBMITTALS

A. Submit one electronic (PDF) copy of each submittal unless otherwise stated. Up to six hard copies of each submittal shall be submitted at DISTRICT's request. One electronic copy will be returned to the Contractor.

B. Number submittals using numbering system as directed by the DISTRICT.

C. Submittal Form. The form included at the end of this section shall be used unless otherwise directed by the DISTRICT. Submit a separate form for each submittal number. Submittals without completed Contractor's Submittal Form attached to each copy of each submittal listed in Schedule of Submittals will be returned without review and stamped "REJECTED".

D. Exceptions and departures from Contract Documents shall be clearly noted, along with justification for each exception or departure. Otherwise, review or approval of submittals shall not constitute approval of exceptions or departures.

E. Stock or standard drawings will not be accepted for review unless full identification and supplementary information is shown thereon in ink or typewritten form.

F. Unless noted otherwise, the Engineer will return a PDF of each submittal to the Contractor with comments noted within twenty-one (21) calendar days following their receipt by the Engineer. The PDF copy of the comments will be emailed on request from the Contractor. It is considered reasonable that the Contractor shall make a complete and acceptable submittal by the second submission of a submittal item. Additional submittal reviews will be conducted at the Contractor's expense as outlined in the General Conditions (Section 00700) of these Specifications. Alternatively, the District reserves the right to withhold monies due the Contractor to cover additional costs of the Engineer's review beyond the second submittal. The Engineer's maximum review period for each submittal, will be twenty-one (21) days per submittal and the Contractor's resubmittal shall be made within twenty-one (21) days. Therefore, for a submittal that requires a second submittal before it is complete, the maximum period for that submittal could be sixty-three (63) days.

G. Review of submittals shall proceed as follows:

1. Submit specified quantity of complete submittals together with Contractor's submittal forms to the DISTRICT for review.

2. Submittals will be stamped "NO EXCEPTIONS TAKEN", "MAKE CORRECTIONS NOTED", "REVISE AND RESUBMIT", "REJECTED", "SUBMIT SPECIFIED ITEMS", or "FOR INFORMATION ONLY".

3. If drawing or data is stamped "REVISE AND RESUBMIT" or "REJECTED ", make necessary corrections and resubmit documents as required in Instruction 1. Contractor's submittal form transmitting revised documents shall show that documents comprise a resubmittal. Revisions and re-submittals shall be numbered as Revision #1, Revision #2, or as appropriate.

4. If changes other than those noted by the DISTRICT are made on a submittal before resubmittal, note such changes on resubmittal.

5. Revise and resubmit submittals as required, until confirmation of compliance is obtained.

6. Costs incurred by the DISTRICT for third and subsequent re-submittals will be deducted from payment due Contractor.
7. Do not begin work described in submittals until such submittals have been reviewed and returned by the DISTRICT stamped "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED". Fabrication or acceptance of delivery of products prior

to receipt of the DISTRICT's satisfactory return of applicable submittals shall be at Contractor's risk.

1.03 INITIAL SUBMITTAL

A. Letter addressed to the DISTRICT identifying Contractor's superintendent, safety officer, and traffic control coordinator, including emergency telephone numbers and signature authorization, and listing names, addresses and telephone numbers for subcontractors.

1.04 SUBMITTALS ON REQUEST FOR SUPPLEMENTAL INFORMATION

A. Detailed construction schedule updates shall be submitted, to describe scheduling of elements of construction requiring DISTRICT's or Contractor's coordination with public, or other private parties or public agencies.

B. Supplemental information will be requested for "approved equals" and may be requested when there is a question that a manufacturer's product conforms to Contract Documents. DISTRICT reserves right to require submittal of supplemental information as described herein before approval of product.

C. Certification of compliance with listed reference standards shall be submitted by manufacturers upon DISTRICT's request. Failure of DISTRICT to request certification of compliance shall not serve as waiver of Contractor's duty to comply with reference standards.

D. Transcripts of results of acceptance tests performed at point of manufacture of products furnished shall be submitted by manufacturers on DISTRICT's request.

E. Samples shall be submitted on DISTRICT's request.

F. Names and addresses of nearest local service representatives that maintain technical service personnel and complete inventory of spare parts and accessories shall be submitted upon DISTRICT's request.

G. List of three installations in which products comparable in size, capacity and rating with those required in Contract Documents are now in regular operation shall be submitted upon DISTRICT's request. Include listing of size capacity or rating of each installation. Include name and telephone number of at least one reference responsible for operations at each installation whom the DISTRICT may contact.

1.05 SHOP DRAWINGS AND PRODUCT DATA

A. Wherever called for in the Contract Documents, the Contractor shall furnish two (2) hard-copies of each shop drawing submittal for review, along with a PDF (Portable Document Format) copy on electronic media. The term "Shop Drawings" as used herein shall be understood to include detail design calculations, shop drawings, fabrication and installation drawings, erection drawings, lists, graphs, catalog sheets, data sheets, and similar items. The Contractor shall submit, as applicable, the following for all materials and equipment to be procured and used in the Work:

1. Copy of the Section of these Specifications under which the submittal is being made, with the directly applicable paragraph(s) highlighted in yellow, and requested exceptions to the Contract Documents and/or any variations from the specified materials or equipment annotated.

2. Complete manufacturer’s specifications including descriptions of materials and protective coatings; parts lists; dimensions; and all options, features or accessories specified on the submittal as required by the Contract Documents or as is necessary for the Work.

3. Requirements for storage and protection prior to installation.

4. Installation procedures.

B. All shop drawing submittals shall be accompanied by the District's standard submittal transmittal form. Any submittal not accompanied by such a form, or where all applicable items on the form are not completed, will be returned for resubmittal.

C. Sequentially number the transmittal forms. Resubmittals shall have original number with an alphabetic suffix.

D. Identify Contract, Contractor, Subcontractor and/or Supplier, pertinent drawing sheet and detail number(s), and specification section number, as appropriate. On standard drawings or data sheets, clearly indicate model and option being proposed and strike out all non-relevant data.

E. Normally, a separate transmittal form shall be used for each specific item or class of material or equipment for which a submittal is required. Transmittal of a submittal of various items using a single transmittal form will be permitted only when the items taken together constitute a manufacturer's "package” or are so functionally related that expediency indicates review of the group or package as a whole. A multiple-page submittal shall be collated into sets, and each set shall be stapled or bound, as appropriate, prior to transmittal.

F. Fabrication of an item shall be commenced only after the Engineer has reviewed the pertinent submittals and has responded with copies marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED." Corrections indicated on submittals shall be considered as changes necessary to meet the requirements of the Contract Documents and shall not be taken as the basis for changes to the contract requirements.

G. Shop drawings shall clearly show dimensions, clearances, slopes, floor space requirements, tolerances, conduit, anchor bolt sizes and embedment's, finishes, performance characteristics, and weight and type of products. Shop drawings shall indicate the location at which products are to be installed, how equipment will be mounted, how it relates to adjacent structures or products, and how connection will be made between Work under this contract and work under other contracts. Shop drawings shall show parts lists and details of appurtenances to be furnished with specified items, along with references to appropriate ASTM, and other reference standards and grades. Use of contract drawing reproductions for shop drawings is subject to rejection.

H. Catalog data shall clearly indicate applicable items when several products are covered on one page. Using black ink, indicate on submitted catalog data, specification section or plan reference being satisfied.

I. Installation or Application Instructions shall be manufacturer's printed instructions including warranty requirements, clearances required and proper field procedures to deliver, handle, install and prepare product for use. In the absence of manufacturer's published literature, ASTM, AWWA or trade standards for proper installation will be accepted.

J. Operation and Maintenance Instructions shall be manufacturer's printed instructions for correct operation and maintenance procedures for product, along with data which must accompany manual as directed by current regulations of government agency. Include operating instructions for each piece of equipment. Describe equipment function, operating characteristics, limiting conditions, operating instructions, startup procedures, normal and emergency conditions, regulation and control, and shutdown. Include preventative maintenance instructions. List warranty requirements. Explain and illustrate preventative maintenance tasks. Include lubrication charts, lists of acceptable lubricants, troubleshooting instructions, and lists of required maintenance tools and equipment. List recommended spare parts, their costs, and ordering information for a manufacturer who can supply these parts. Index instructions for easy reference. Include information for installed equipment only.

K. Manufacturer's Statement of Responsibility shall be copy of form attached, signed by authorized factory representative for manufacturer whose product is being furnished.

L. Certification of Compliance shall certify materials have been sampled, tested and found to comply with applicable reference standards.

M. Engineering Calculations shall be clearly legible, and shall demonstrate compliance with state and local codes, applicable standards, and contract requirements. Calculations shall be sealed by a licensed professional engineer registered in California.

N. All Contractor shop drawing submittals shall be carefully reviewed by an authorized representative of the Contractor prior to submission. Each submittal shall be dated, signed, and certified by the Contractor as being correct and in strict conformance with the Contract Documents. In the case of shop drawings, each sheet shall be so dated, signed, and certified. No consideration for review by the Engineer of any Contractor submittals will be made for any items which have not been so certified by the Contractor. All non-certified submittals will be returned to the Contractor without action taken by the Engineer, and any delays caused thereby shall be the responsibility of the Contractor.

1.06 CONTRACTOR'S SCHEDULE

A. The Contractor's construction schedule and reports shall be prepared and submitted to the District in accordance with the General Provisions.

1.07 SAMPLES

A. Whenever, in the Specifications, samples are required, the Contractor shall submit not less than two (2) samples of each such item or material for review.

B. Samples, as required herein, shall be submitted for acceptance a minimum of thirty (30) days prior to ordering such material for delivery to the job site, and shall be submitted in an orderly sequence so that dependent materials or equipment can be assembled and reviewed without causing delays in the Work.

C. All samples shall be individually and indelibly labeled or tagged, indicating thereon all specified physical characteristics and the Manufacturer's name for identification. Upon receiving acceptance of the Engineer, two (2) sets of the samples will be returned to the Contractor. One set of samples will be retained by the District and one set of samples shall remain at the job site until completion of the Work.

D. Unless indicated otherwise, all colors and textures of specified items presented in sample submittals shall be from the manufacturer's standard colors and standard materials, products, or equipment lines. If the samples represent non-standard colors, materials, products, or equipment lines and their selection will require an increase in contract time or price, the Contractor shall clearly indicate same on the transmittal page of the submittal.

1.08 CONSTRUCTION PHOTOGRAPHS

A. Preconstruction photographs shall be submitted to the DISTRICT before any work is performed which has potential to disturb or modify public or private property, not owned by the DISTRICT and that owned by the DISTRICT but not considered to be affected by the proposed construction. Photographs shall be of sufficient quality and thoroughness to fully document pre-existing damage or wear to photographed property for which Contractor or DISTRICT might be asked to compensate property owner were it not for photographic evidence of pre-existing damage. Failure by Contractor to submit preconstruction photographs may be taken by DISTRICT as evidence that subsequent claims by property owners for damage to their property can be rightfully attributed to Contractor's actions.

1.09 NOTIFICATION OF AFFECTED RESIDENCES AND BUSINESSES

A. When working in existing streets, written notification, with Contractor's 24-hour emergency phone number, shall be provided to residences and businesses fronting the project on either side of street. Notify these parties 72 hours in advance of construction which will affect these properties. Door-hangers or other means of notification shall be submitted and approved in advance by the DISTRICT.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 SCHEDULING FOR SUBMITTALS

The Contractor is to recognize the time and sequence related to the submittals required by the Contract Documents. Therefore, the Contractor shall demonstrate competency in preparing and delivering submittals. The Contractor will not be allowed additional Contract time or compensation due to delays associated with submittals or their review. In addition, the costs associated with expedited review of a submittal or a submittal conference may be withheld from monies due the Contractor by the District to cover additional costs of the Engineer’s or Design Engineer’s review.

END OF SECTION

SECTION 01310

CONSTRUCTION SCHEDULE

PART 1 – GENERAL

1.01 REQUIREMENTS OVERVIEW

A. The Contractor's planning, scheduling and execution of the contract work shall be presented to the District by submission of the progress schedule information and data as specified in the Contract Documents and including the additional requirements herein.

B. The Work under this contract will be planned, scheduled, executed, and reported by the Contractor using a Critical Path Method (CPM) schedule within a Work Breakdown Structure approved by the District. The Contractor will adhere to established technical standards for CPM scheduling using a computerized precedence diagram method. The Contractor is required to provide baseline and status data using a hard copy and electronic formats approved by the District.

C. All schedules shall be in accordance with the requirements of the Contract. The District's review or acceptance of any schedule shall not relieve the Contractor from responsibility for complying with the Contract requirements, adhering to those sequences of work indicated in or required by the contract documents, or from completing any work omitted from the schedule within the Contract Time. This review shall not extend to the Contractor's means, methods, or techniques, which shall remain the sole responsibility of the Contractor.

1.02 SOFTWARE/INTERFACE REQUIREMENTS

A. The Contractor shall use CPM scheduling software to produce Contract schedules and reports as specified herein. This software shall run on PC compatible computers, be commercially available for lease or purchase, and be capable of processing and plotting schedule data as specified in this Section. The Contractor shall provide all schedules and schedule updates electronic format. The schedule files shall be compatible with Windows.

1.03 QUALITY ASSURANCE

A. The Contractor shall perform the work covered by this Section with personnel having substantive experience in using computer based scheduling programs on construction projects. The responsible scheduling personnel will be evaluated by the District or its representative prior to the commencement of work. If the District has reasonable objection to the qualifications of the Contractor's nominated scheduling personnel, the Contractor shall, at no additional cost to the District, within two weeks, assign acceptable personnel or employ a full time qualified subcontractor, subject to the review of his/her qualifications by the District. Employment by the Contractor of a scheduling subcontractor shall not in any way alter or reduce the Contractor's obligations under this Section.

B. In preparing all contract schedules, it is the responsibility of the Contractor to work with each subcontractor and supplier to obtain information pertinent to the planning and updating of their respective activities and schedules.

1.04 USE OF FLOAT

A. Total Float is the number of days by which a part of the Work in the Construction Schedule may be delayed from its early dates without necessarily extending the Contract Time.

B. Contract Float is the number of days between the Contractor's anticipated date for early completion of the Work, or specified part, and the corresponding Contract Time.

C. Total float and contract float belong to the project and are not for the exclusive benefit of any party. They shall be available to the District or its representatives, consultants, or the Contractor to accommodate changes in the Work, or to mitigate the effect of events which may delay performance or completion. The District will monitor and optimize the use of float for the benefit of the Project.

1.05 EARLY COMPLETION

A. An early completion schedule is one which anticipates completion of all or specified part of the work ahead of the corresponding Contract Time. Since Contract Float belongs to the project, the Contractor shall not be entitled to any extension in Contract Time, or recovery for any delay cost incurred because of extensions in an early completion date, until all Contract Float is used or consumed and performance or completion of the Work extends beyond the corresponding Contract Time.

1.06 FLOAT SUPPRESSION

A. Float suppression techniques are prohibited. The Contractor shall remove any float suppression techniques, e.g., preferential sequencing (crew movements, equipment use, for reuse, etc.), extended durations, imposed dates, scheduling of non-critical work, artificial logic, and others, as a prerequisite to a request for an increase in Contract Price or Contract Time. Use of any type of schedule constraint requires prior approval by the District.

1.07 NON-COMPLIANCE

A. The District may refuse the whole or part of any payment if, in the District's opinion, the Contractor's failure, refusal or neglect to provide the required schedule information precludes proper evaluation of the Contractor's progress. The District may withhold from any payment a set-off, if in the District's opinion, the Contractor's failure, refusal or neglect to provide the required schedule information precludes a proper evaluation of whether or not the Contractor is prosecuting the Work with the diligence that will ensure its completion within Contract Time.

B. The Contractor agrees that the Contractor's failure, neglect, or refusal to comply with the requirements of this Section, or any portion thereof, constitute a material

breach of the Contractor's obligations under this Contract. The Contractor recognizes and agrees that such failure, neglect, or refusal prejudices the District's ability to recognize and mitigate delay, and such failure, neglect, or refusal prevent the timely issuance of extensions of Contract time, when such extension may be warranted. Therefore, the Contractor hereby waives all rights to additional costs or time extensions due to delays or accelerations that result from or occur during periods of time that Contractor fails, neglects, or refuses to fully comply with the requirements of this Section.

C. These remedies for the Contractor's failure, neglect or refusal to comply with the requirements of this Section are in addition to, and not in limitation of, those provided under other sections of the Contract.

PART 2 - PRODUCTS

2.02 CONTRACT SCHEDULES - GENERAL CRITERIA

A. All Contract Schedules shall be prepared by the Contractor and reflect the Contractor's plans for and status of the Work. The Contractor shall provide an electronic copy of all Contract Schedules.

B. The Contract Schedules shall show the breakdown of work into activities and relationships only to the extent required to effectively manage the work. The Contract Schedules shall show the division of the Work into activities and specify the progression from the Notice to Proceed to the completion of the Work. The Contract Schedule shall include appropriate time allowances for submittals, items of interface with work performed by others, and specified Construction, Physical Checkout, Field Test, Functional Test, Start-up and Performance Test activities. All activity durations shall be in work days.

C. The Contractor's Construction Schedule shall include all procurement related activities which lead to the delivery of permanent materials to the site. Procurement activities include but may not be limited to preparation of shop drawings, review and acceptance of shop drawings, materials fabrication, and materials delivery. Upon written approval by the District, these activities may be displayed or reported as a separate Off-Site Activities Schedule, properly correlated to the Contractor's Construction Schedule.

D. The Contractor shall schedule those requisite duties and responsibilities of the District and others (performing work for the District) indicated in or required by the Contract Documents.

2.02 SCHEDULE UPDATE

A. Updating the Contractor's Construction Schedule and scheduling of changes and other events affecting the schedule is the responsibility of the Contractor. Contract Time (including all contracted milestones) shall not be changed without a formal Change Order approved by the District.

B. The Contractor shall update the Contractor's Construction Schedule each month. Updating the schedule shall consist of the following:

1. Updating Activity Status:

Each month the Contractor shall enter percent complete, remaining duration, actual start, and actual completion dates into the schedule and recalculate the schedule based on the payment cutoff date for that month. Percent complete shall be the percent agreed to by the District at the monthly schedule meeting. Remaining duration shall be the Contractor's best estimate of the time required to complete activities which have started but are not yet complete. Percent complete and remaining duration shall be arrived at independently for each activity. The remaining duration shall not be automatically calculated by the scheduling software based on the percent complete. The retained logic method of schedule calculation shall be used to calculate the schedule unless otherwise approved by the District.

2. Corrections to the Schedule:

Each month, the Contractor shall make those corrections to the schedule which have been identified by the District since the last update. Generally, these corrections will include, but may not be limited to, correction of inaccurate actual dates, correction of logic for activities which did not start or finish as scheduled and are being driven by the data date, inaccurate representation of contract milestones, missing actual start or completion dates, incorrect budget or actual cost amounts, and out of sequence progress. The Contractor shall also correct any similar errors that he is aware of and shall inform the District of any such corrections.

3. Revisions to the Schedule:

Schedule Revisions are defined as any change to schedule activities or logic other than the updating of actual start and completion dates, percent complete or remaining duration. All schedule revisions must be approved by the District in advance. Schedule revisions shall be based on the impact to the schedule of changes in the work or other delays as agreed to by the District during negotiations for the change or other impact in question. The specific activities added and their logical ties to existing schedule activities shall be explained in detail in the schedule narrative. After any schedule impact is negotiated and the specific activities and logic to be added have been approved, the Contractor shall promptly incorporate the revision into the schedule prior to the next update. Added activities shall be coded as directed by the District indicating which RFP they are associated with. Revisions shall be man-hour and resource loaded.

2.03 SCHEDULE IMPACT ANALYSIS

A. Whenever the Contractor requests an extension of the Contract Time or any Contract Milestone, the Contractor shall provide an analysis of the critical path as required by the General Conditions. At a minimum, the analysis must contain the following:

1. The version of the Contractor's Construction Schedule on which the analysis is based.

2. The contract milestones affected and the number of day's extension requested for each.

3. A plot starting at the time line and showing the controlling path to each affected milestone before the change or delay in question.

4. A plot including the activities which were added to represent the change or delay starting at the time line and showing the controlling path to each affected milestone after the change or delay in question.

5. A listing of all activities and logic added, deleted or changed to represent the impact of the change or other delay being analyzed.

6. An electronic copy of both before and after schedules compatible with Windows.

PART 3 - EXECUTION

3.01 SCHEDULE DEVELOPMENT

A. Contractor's Construction Schedule

1. The Contractor shall submit the Construction Schedule within the time frame specified in the General Conditions. This schedule shall reflect the entire scope of the Contract Work as awarded.

2. The Construction Schedule shall bear the Contractor's stamp of approval signed by the Contractor. The Contractor's stamp of approval shall constitute a representation to the District that the Contractor verified all data in the Construction Schedule and assumes full responsibility for doing so, and that the Contractor has reviewed and coordinated all activities and logic in the Construction Schedule with the requirements of the Work.

3. The District will review and return written comments on the Construction Schedule to the Contractor within fourteen (14) calendar days.

4. If revisions are required, the Contractor shall make appropriate adjustments or corrections and shall deliver the revised Construction Schedule to the District directing specific attention, in writing, to adjustments or corrections made other than those made in response to the District comments on the previous submittal. The District will review and return written comments on the revised Construction Schedule within seven (7) calendar days. This step shall be repeated until the schedule is accepted. Acceptance of the Construction Schedule by the District shall be a Condition Precedent to processing any Application for Payment, after the first full month.

5. The District's review and comments will be for conformance with the Contract Time and those sequences of work indicated in or required by the Contract Documents, to record dates for milestones, and for conformance with the requirements of this Section and other information given in the Contract Documents which may have a bearing on the schedule. The District's review shall not extend to the Contractor's means, methods, or techniques, the correctness of which shall remain the sole responsibility of the Contractor.

3.02 MONTHLY UPDATE OF THE CONTRACTOR'S CONSTRUCTION SCHEDULE

A. The cutoff date for the payment application and schedule update shall be determined by District.

B. Schedule Status Submittals

1. An update of the Construction Schedule is due monthly, with (attached to) each Application for Payment. Receipt by the District of the update of the Construction Schedule will be a Condition Precedent to processing each Application for Payment.

2. Neither the updating of the Construction Schedule nor the updating of any report or schedule submitted to the District by the Contractor under this Section shall have the effect of amending or modifying, in any way, the Contract Time, Contract Completion Date, or Contract Milestone Dates.

C. Monthly Reviews

1. Monthly review meetings between the District and the Contractor will be held within seven (7) calendar days prior to the payment cutoff date. The purpose of this meeting is to finalize the percent to be paid for activities completed or in progress, and to review and discuss any required corrections and proposed revisions to the schedule.

2. Prior to the monthly review meeting, the Contractor will update the status of each activity in progress or completed with actual or estimated actual start and finish dates, physical percent complete and remaining duration for activities started but not completed and calculate the CPM Network through payment cut off date. The Contractor shall provide an electronic copy of the updated schedule to the District three work-days prior to the schedule review meeting. Contractor will provide appropriate reports as defined by the District at the monthly review meeting.

3. After the meeting, the Contractor shall make revisions to the status of activities as directed by the District and submit the payment application along with the final update of the Construction Schedule within seven calendar days.

3.03 SCHEDULE REVISIONS

A. The Construction Schedule must be revised when it is no longer useful as a status and control mechanism as determined by the District or when a change or delay impacts the Contractor's timing and sequence of the Work. Contract Time (including all contracted milestones) cannot be changed without a formal Change Order approved by the District.

3.04 SCHEDULE RECOVERY

A. Within five days after a schedule problem is recognized and documented, the Contractor shall submit a recovery schedule to the District which shall consist of proposed revisions to the Contractor’s Construction Schedule demonstrating how the Contractor intends to achieve all contractual milestones including contract completion within the allotted contract time. The accompanying narrative should describe the cause of the problems and the actions planned by the Contractor to recover the schedule. The Contractor shall promptly undertake appropriate action at no additional cost to the District to recover the schedule whenever the current schedule shows that the Contractor did not or will not achieve a milestone established in the Construction Schedule.

B. Lack of Action: The Contractor's refusal, failure or neglect to take appropriate recovery action or to submit a recovery schedule shall constitute reasonable evidence that the Contractor is not prosecuting the Work, or separable part, with the diligence that will ensure its completion within the applicable Contract Time. Such lack of action shall constitute sufficient basis for the withholding of some or all of any payment due, and shall be considered grounds for termination by the District.

END OF SECTION

SECTION 01354

HAZARDOUS MATERIAL PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes: Procedures required when encountering hazardous materials at the Work site.

1.02 REFERENCES

A. California Code of Regulations (CCR):
   1. Title 8: Industrial Relations.
   2. Title 22: Social Security.

B. California Occupational Safety and Health Administration (Cal-OSHA).

C. Occupational Safety and Health Administration (OSHA).

D. United States Code of Federal Regulation (CFR):
   1. Title 29 - Labor:
      a. 1926.62 - Lead.
   2. Title 40 - Protection of Environment.
      a. 261 - Identification and Listing of Hazardous Waste.

1.03 SUBMITTALS

A. Submit laboratory reports, hazardous material removal plans, and certifications.

B. Submit the following work plan:
   1. Removal and Legal Disposal of Asbestos Cement Pipe Plan.
      a. Work plan shall include, but not be limited, to the following:
         1) Schedule of work.
         2) Security measures for work and disposal area.
         3) Staff training: Contractor shall provide at least one competent person who is capable of identifying asbestos hazards at the job site for the entire duration of the AC pipe removal and disposal operation.
         4) Trenching and removal of pipe procedure.

1.04 DEFINITIONS

A. Adequately Wet: Penetration of the pipe wall with liquid to prevent release of particulates.

B. Asbestos Cement Pipe: Also commonly referred to as AC Transite Pipe, AC pipe or ACP. Pipe that is generally composed of cement and asbestos fibers.

C. Competent Person: A trained worker who is capable of identifying existing and predictable asbestos hazards, perform exposure assessment and monitoring, is qualified to train other workers, and has the authority to take immediate corrective action to eliminate a hazardous exposure.

D. Non-friable Asbestos – Containing Material (NACM): Material containing more than 1 percent asbestos, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

E. Regulated Asbestos – Containing Material (RACM): Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder in the course of work.

1.05 HAZARDOUS MATERIALS PROCEDURES

A. Hazardous materials are those defined by 40 CFR and State specific codes.

B. When hazardous materials have been found:
   1. Prepare and initiate implementation of plan of action.
   2. Notify immediately District, Engineer, and other affected persons.
   3. Notify such agencies as are required to be notified by Laws and Regulations with the times stipulated by such Laws and Regulations.
   4. Designate a Certified Industrial Hygienist to issue pertinent instructions and recommendations for protection of workers and other affected persons' health and safety.
   5. Identify and contact subcontractors and licensed personnel qualified to undertake storage, removal, transportation, disposal, and other remedial work required by, and in accordance with, laws and regulations.

C. When hazardous materials have been found that were identified by analysis:
   1. Prepare and initiate implementation of plan of action.
   2. Notify such agencies as are required to be notified by Laws and Regulations with the times stipulated by such Laws and Regulations.
   3. Designate a Certified Industrial Hygienist to issue pertinent instructions and recommendations for protection of workers and other affected persons' health and safety.
   4. Identify and contact subcontractors and licensed personnel qualified to undertake storage, removal, transportation, disposal, and other remedial work required by, and in accordance with, laws and regulations.

D. Forward to Engineer, copies of reports, permits, receipts, and other documentation related to remedial work.

E. Assume responsibility for worker health and safety, including health and safety of subcontractors and their workers.
   1. Instruct workers on recognition and reporting of materials that may be hazardous.

F. File requests for adjustments to Contract Times and Contract Price due to the finding of Hazardous Materials in the Work site in accordance with Contract Documents.

1. Minimize delays by continuing performance of the Work in areas not affected by hazardous materials operations.

1.06 LEAD PAINT REMOVAL AND DISPOSAL

A. Existing paint on the interior and/or exterior surfaces that may contain lead in concentrations which will require implementation of hazardous material compliance procedures as legislated by the following:
   1. CFR, Title 29 and Title 40.
   2. CCR, Title 8 and Title 22.

B. Remove samples of paint from the structures identified herein and have samples tested by a certified testing laboratory to determine lead content in samples.
   1. Ensure that sufficient numbers of paint samples are removed and tested to provide adequate information regarding lead content in paint.
   2. Ensure that samples contain the total thickness of the paint to the substrate where removed.
   3. Ensure that each sample contains a sufficient quantity of paint to facilitate proper and adequate analyses by testing laboratory.
   4. Ensure that samples are adequately identified with location from which it was removed.

C. Laboratory testing of paint samples: In accordance with 40 CFR 261,
   1. Submit 10 copies of complete laboratory analyses of paint samples.

D. Submit a plan for the removal, containment, and disposal of lead-based paint and associated debris.
   1. Submit 10 copies of plan.

E. Prior to beginning work associated with the removal, containment, and disposal of lead-based paints, prepare and submit to the Engineer for his review 6 copies of the following:
   1. Listing of lead paint removal equipment to be used.
   2. Outline of procedures to be used to remove lead paint.
   3. Data and specifications describing chemical stripping materials to be used.
   4. Data and specifications describing abrasive blast materials and grit size to be used.
   5. Plan describing lead paint removal, hazardous waste debris containment, and hazardous waste disposal methods.
   6. Safety plan, consisting of a written plan of action covering operational requirements for safe removal of lead paint, safe handling and containment of waste and debris generated by the operation, and safe disposal of hazardous waste and non-hazardous waste materials, complying with the most stringent requirements of the following:
      a. Equipment and material manufacturer's safety sheets.
      b. 29 CFR 1926.62.

F. Carry out lead paint removal, containment, and disposal work in accordance with the following SSPC guidelines:
   1. SSPC-Guide 6.
      a. Open Abrasive Blast Cleaning with Expendable Abrasive.
      b. Open Abrasive Blast Cleaning with Recyclable Abrasive.

c. Closed Abrasive Blast Cleaning with Recyclable Abrasive.
d. Chemical Stripping.

2. SSPC-Guide 7.

G. Assume responsibility for the proper utilization of the paint removal method selected. When abrasive blast cleaning is selected to remove lead-based paint, comply with all applicable federal, state, and local air quality, pollution, and environmental control regulations for blast cleaning. When chemical stripping is selected to remove the lead based paint, adhere to the chemical manufacturer's recommendations for the application of the product, the removal of the paint, and the containment of the debris.

H. Lead paint removal work shall be performed by a Contractor having prior experience in the removal method selected and shall provide at least 5 references of similar projects completed, 3 of which must have been completed within the past 12 months, documenting his experience.

I. Utilize a minimum of Class 3 containment and ventilation system as described in SSPC-Guide 6 during lead paint removal and containment procedures as required for the conditions.

J. Do not leave spent abrasive blast material, chemical stripping material, or lead paint debris uncontained on the project site overnight.

K. Test each container of paint debris, spent blast cleaning abrasive, chemical stripping debris, and other waste material generated by the operation to determine the waste material hazardous waste classification.

L. Assume responsibility for the disposal of lead paint waste and associated waste generated by the removal of the lead paint and the preparation of the surfaces for recoating. Dispose in accordance with applicable federal, state, and local requirements and regulations.

M. Accurately complete the Uniform Hazardous Waste Manifest included at the end of SSPC-Guide 7. Indicate on the Manifest that the District is the hazardous waste generator, and obtain the District's Environmental Protection Agency identification number for use in completing the Manifest.

1.07 ASBESTOS MATERIALS

A. Asbestos cement (AC) pipe that is to be removed shall not be cut but shall be separated at existing pipe joints for removal. If asbestos cement pipe (ACP) must be cut and handled in the field to accomplish the work, the Contractor shall be solely responsible for and shall take all appropriate precautions for protecting against threats to health and safety of the work force and general public arising out of construction involving asbestos. The Contractor shall comply with all applicable regulations for the handling, cutting, shaping, installation and disposal of asbestos. No separate payment shall be made for compliance with applicable regulations or for the removal of asbestos cement pipe unless such work is included in a separate bid item of work.

B. Asbestos cement pipe to be disposed shall be properly handled, manifested, prepared for transport following criteria of County of San Diego Department of Public Works, Solid

Waste Division, and delivered to a landfill permitted for disposal of non-friable asbestos containing materials. Proper disposal shall be the sole responsibility of the Contractor. Contractor shall return the completed Generator copy (yellow) manifest to the District's Representative.

C. Other hazardous materials, asbestos, polychlorinated biphenyl (PCB) or any other toxic wastes encountered by the Contractor during the Work except AC pipe shall require the Contractor to stop work in the affected area and report the condition to the District in writing. The work in the affected area shall not thereafter be resumed except by written agreement of the District and Contractor if in fact the material is asbestos or PCB and has not been rendered harmless. The work in the affected area shall resume in the absence of asbestos or PCB, or when it has been rendered harmless, by written agreement of the District and Contractor, or by arbitration per General Conditions. Unless otherwise specified in the Contract Documents, the District shall contract directly for the removal and/or abatement of any hazardous materials or toxic wastes except for AC pipe.

D. It is the specific intent of these Contract Documents to exclude from the Work any and all products or materials containing asbestos. No products containing asbestos shall be incorporated in the Work.

E. Removal of existing ACM shall be performed by a firm that is registered by Cal-OSHA and certified by the State Contractors Licensing Board and shall be a Licensed Abatement Contractor in the state where the project is located.

F. Submit 2 copies of plan for the removal, containment, and disposal of ACM.

G. Submit 2 copies of abatement license of ACM removal contractor.

PART 2 PRODUCTS

2.01 ASBESTOS CEMENT PIPE (ACP)

A. The pipe to be removed from the ground has been in service for approximately 45 years.
   1. The manufacturer and exact composition of the pipe to be removed is unknown.
   2. ACP is generally manufactured using portland cement or pozzolan cement and asbestos fiber.
   3. Common pipe lengths: 3 feet 3 inches, 6 feet 6 inches, 9 feet 9 inches, and 13 feet 0 inches.

B. Pipe fittings. Separate from pipe brass, galvanized pipe, copper, cast iron, galvanized pipe or steel fittings and dispose of separately.

PART 3 EXECUTION

3.01 ASBESTOS MATERIALS

A. Notifications:
   1. Notify Cal-OSHA 24 hours prior to performing asbestos material removal operations.

2. Contractor shall notify District 3 working days in advance of commencing asbestos material removal operations.

B. Work area:
   1. Establish a regulated work area, using at a minimum, construction warning tape to establish limits of work area for the asbestos material removal.
   2. On site stockpiling or storage of asbestos material designated for disposal shall not be allowed.

C. Safety:
   1. Conduct an Initial Exposure Assessment (IEA).
   2. Provide a hand/face wash station.

D. Worker qualifications:
   1. Asbestos removal shall be performed by trained employees in conformance with Section (g) Methods of Compliance, of CCR, Title 8, § 1529, "Asbestos," mandating wet methods, vacuum cleaners with HEPA filters to collect debris and prompt cleanup.

E. Legal disposal:
   1. Legal disposal of asbestos material is the Contractor's responsibility.
   2. Contractor shall transport the asbestos material to the location designated by the District. Contractor to provide a tarp and cover to provide containment.

3.02 EXCAVATION OF AC PIPE

A. Machine excavates to expose asbestos cement pipe.

B. Hand excavates areas under pipe where breaks are planned.

C. Pipe shall be pre-wetted prior to any breaks being made.

D. Pipe shall be snapped using mechanical snapping methods.

3.03 AC PIPE REMOVAL

A. All required pipe breaking operations shall require adequate pre-wetting with potable water.

B. The Contractor shall make every effort to minimize the number of pipe breaks. Wherever possible, the pipe should be removed by pulling the pipe out of the pipe joint collars.

C. Remove sections of AC pipe intact at joint collars by mechanical snapping methods between collars.

D. Wet and containerize waste materials as removed from the trench. Use lifting straps and methods that do not further damage the pipe.

E. Sections of AC pipe that become cut, have broken edges or have any friable surface shall be wet at exposed fractures and immediately wrapped.
   1. The pipe ends shall be sealed completely using a minimum 6-mil poly film wrap, which is securely fastened, taped to completely enclose the pipe and ACP

appurtenances and shall have conspicuous, legible labeling that has the following or equivalent labeling: CAUTION: CONTAINS ASBESTOS FIBERS. BREATHING ASBESTOS DUST MAY CAUSE SERIOUS BODILY HARM.

F. AC Pipe sections shall not be left exposed in public view, either in trench or in disposal area.

G. All connecting parts of pipe, rubber gaskets, and pipe couplings shall be discarded with pipe.

H. AC pipe from this project only, shall be placed in the bin designated.

END OF SECTION

SECTION 01370

SCHEDULE OF VALUES

PART 1 – GENERAL

1.1 DESCRIPTION

A. The Schedule of Values is an itemized list that establishes the value or cost of each part of the Work. It shall be used as the basis for preparing progress payments and may be used as a basis for negotiations concerning additional work or credits which may arise during construction. Quantities and unit prices may be included in the Schedule of Values when approved or required by the Engineer.

1.2 PREPARATION

A. The Schedule of Values shall show the breakdown of labor, materials equipment and other costs used in preparation of the Contractor's Bid.

B. Within 30 calendar days after the date of receipt of the Notice to Proceed, submit a Preliminary Schedule of Values for the major components of work. The Preliminary Schedule of Values shall be a detailed breakdown of each bid item with sufficient information for the Engineer to evaluate the work included and reasonable costs associated with each respective bid item. List sub-items of major products or systems as appropriate or when requested by District. Meet with the District or District Representative and jointly review the Preliminary Schedule of Values and make any adjustments in value allocations if, in the opinion of the Engineer, these are necessary to establish fair and reasonable allocation of values for the work components. The District may require reallocation of major work components from items in the above listing if, in the opinion of the District, such reallocation is necessary.

C. Prepare and submit a detailed Schedule of Values to the District based on the accepted Preliminary Schedule of Values. The detailed Schedule of Values will be used to determine monthly progress payment amounts. The District will be the sole judge of acceptable numbers, details, and description of values established. If, in the opinion of the District, a revision in the number of items contained in the Schedule of Values is necessary, add or delete items so identified.

D. The costs shall be in sufficient detail to indicate separate amounts for each Bid Item.

E. Mobilization shall consist of preparatory work and operations including, but not limited to, those necessary for the movement of personnel, equipment, supplies and incidentals to the project site; for the establishment of all offices, buildings, temporary facilities and other facilities necessary for the Work; and for all other work and operations which must be performed or for costs incurred prior to the beginning of construction of the various Contract items. The Contractor shall list bonds, insurance, and permits separately on the Schedule of Values when such items are not identified separately on the Bid Schedule. When requested by Engineer, the Contractor shall provide substantiating data to support cost values.

F. The sum of the individual values shown on the Schedule of Values must equal the total Contract Price.

G. Each item shall include a directly proportional amount of the Contractor's overhead and profit.

H. The Schedule of Values shall show purchase and delivery costs for materials and equipment for which the Contractor will submit a payment request prior to their installation. If this is not broken out in the Schedule of Values, the contractor will not be made until the item is installed, tested, and in operation.

I. Coordinate the Schedule of Values with the Construction Schedule in accordance with Section 01310.

J. Incorporate approved Change Orders into the Schedule of Values. Individual Change Order items shall be itemized by change order item number.

1.3 SUBMITTAL

A. The Contractor shall submit the Schedule of Values prior to or at the pre-construction conference for District's review and approval.

B. The Contractor shall submit three copies of the final Schedule of Values to the District for approval at least 20 days prior to submitting the first progress payment request. The Contractor shall revise and resubmit the Schedule of Values as required until final approval by the District.

- END OF SECTION -

SECTION 01410

TESTING LABORATORY SERVICES

PART 1 – GENERAL

1.01 DESCRIPTION

A. The Contractor will employ and pay for an independent Approved Testing Laboratory to provide inspection, sampling and testing services as specified in the individual specification sections. Applicable sections include, but are not limited to:

1. Section 02223 – Trenching, Backfilling and Compaction

2. Section 02510 – Asphaltic Concrete Paving

3. Section 03200 – Steel Reinforcement

4. Section 03300 – Cast-In-Place Concrete

5. Section 03315 – Grout

6. Section 15041 – Disinfection of Piping

7. Tests or inspections required by any agency having jurisdiction of the public right-of-way

B. The Contractor shall pay for:

1. Independent tests paid for by the District or performed by District forces, or any public agency, where such tests reveal nonconformity with the Contract Documents. This shall include repeat tests required because of the Contractor's failure to meet the requirements of the Contract Documents for any reason.

2. Tests made for the Contractor's convenience.

C. The testing laboratory is not authorized to approve or accept any portion of the Work; rescind, alter or augment the requirements of the Contract Documents; or perform any duties of the Contractor.

1.02 QUALIFICATIONS OF LABORATORY

A. Where applicable, the testing laboratory will meet "Recommended Requirements for Independent Laboratory Qualification", latest edition, published by the American Council of Independent Laboratories and the basic requirements of ASTM E 329 "Standards of Recommended Practice for Inspection and Testing Agencies for Concrete and Steel as Used in Construction". Where applicable, the testing laboratory shall meet or exceed the requirements of ASTM C1077.

B. Testing equipment used by the laboratory will be calibrated at maximum 12-month intervals by devices of accuracy traceable to either National Bureau of Standards or accepted values of natural physical constants.

C. The Contractor shall submit a shop drawing in accordance with Section 01300 for the Testing Laboratory for approval demonstrating these qualifications for testing required in the individual specification sections noted above. Upon approval said laboratory will thereafter be referred to as the Approved Testing Laboratory.

1.03 LABORATORY DUTIES

The testing laboratory will:

1. Cooperate with the Contractor to provide qualified personnel promptly on notice.

2. Perform the specified inspections, sampling and testing of materials; observe methods of construction; comply with applicable standards; ascertain compliance with requirements of Contract Documents.

3. Promptly notify the Contractor of irregularities or deficiencies in the Work which are observed during the performance of services.

4. Promptly submit 5 copies of reports of inspections and tests to the Contractor including:

    a. Date issued.
    b. Project title and number.
    c. Testing laboratory name and address.
    d. Date of inspection or sampling.
    e. Record of temperature and weather.
    f. Date of test.
    g. Identification of product and specification section.
    h. Location in the Project.
    i. Type of inspection or test.
    j. Results of tests and observations regarding compliance with the Contract Documents.

1.04 CONTRACTOR'S RESPONSIBILITIES

The Contractor shall:

A. Cooperate with laboratory personnel and the District. Provide access to Work and to manufacturer's operations.

B. Provide preliminary representative samples of materials to be tested in required quantities to the laboratory.

C. Furnish copies of product test reports to the District.

D. Provide to the laboratory the preliminary design mix proposed for concrete and other material mixes that require testing by the testing laboratory.

E. Furnish labor and facilities:

1. To provide access to Work to be tested.

2. To obtain and handle samples at the site.

3. To facilitate inspections and tests.

4. For laboratory's exclusive use for storage and curing of test samples.

5. Forms for preparing concrete test beams and cylinders.

F. Notify the laboratory and the District sufficiently in advance of operations to allow for assignment of personnel and scheduling or witnessing of tests.

G. Arrange with laboratory and pay for additional samples and tests required for Contractor's convenience.

H. Performing BacT testing by an independent qualified lab per Section 15041 – Disinfection of Piping.

1.05 INDEPENDENT TESTS BY THE DISTRICT

The District reserves the right to do, or not to do, additional independent testing at any time at the expense of the District to verify the results of the Contractor-retained Approved Testing Laboratory.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01505

MOBILIZATION

PART 1 - GENERAL

1.01 GENERAL

A. Mobilization shall include the acquisition of all permits; moving onto the site of all equipment, and other construction facilities, all as required for the proper performance and completion of the Work. Mobilization shall include, but not be limited to, the following principal items:

1. Installing temporary construction power, wiring, and lighting facilities.
2. Developing construction water supply as required.
3. Providing all on-site communication facilities, including telephones and radios for Contractor personnel.
4. Providing on-site sanitary facilities and potable water facilities for Contractor personnel.
5. Arranging for and establishing Contractor's storage yard as required.
6. Obtaining all required permits.
7. Posting all OSHA required notices and establishment of safety programs.
8. Preparing and submitting product or equipment submittals and shop drawings.

1.02 CONSTRUCTION FACILITIES PLAN

A. Prior to commencement of any field work, the Contractor shall submit a Construction Facilities Plan to the Engineer for approval. Said plan shall show the layout, equipment, materials and procedures that Contractor proposes for construction of temporary electrical, telephone, lighting, water, sanitation, field offices and sheds, and other similar site facilities.

B. The Contractor's construction facilities shall be of a temporary nature. The Contractor shall be wholly responsible for the security of its lay down area, and for all its materials, equipment and tools at all times.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01510

TEMPORARY UTILITIES

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. The Contractor shall make arrangements with the appropriate utility agencies for temporary connections to the utilities. The Contractor is responsible for extending any utility services to the required point of use.

B. Type of Services: The types of utility services that may be required for general temporary use at the project site may include, but are not limited to, the following:

1. Sanitary Sewer
2. Electrical Power
3. Potable Water
4. Telephone

C. Scheduled Uses: The Contractor shall schedule the implementation and termination of service for each temporary utility or facility.

PART 2 - PRODUCTS

2.01 MATERIALS

A. The Contractor shall provide either new or used materials and equipment, which are in substantially undamaged condition and without significant deterioration and which are recognized in the construction industry, by compliance with appropriate standards, as being suitable for intended use in each case. Where a portion of a temporary utility is provided for the Contractor by a utility company, the Contractor shall provide the remainder with matching and compatible materials and equipment and shall comply with recommendations of the utility company.

PART 3 - EXECUTION

3.01 INSTALLATION OF TEMPORARY UTILITY SERVICES

A. General: Wherever feasible, the Contractor shall engage the utility company to install temporary service to the project, or as a minimum, to make connection to existing utility service; shall locate services where they will not interfere with total project construction work, including installation of permanent utility services; shall maintain temporary services as installed for required period of use; and shall relocate, modify or extend as necessary from time to time during that period as required to accommodate total project construction work.

3.02 ELECTRICAL SERVICE

A. Contractor Operations: The Contractor shall pay all costs for electrical system installation and usage charges associated with its operations.

B. Approval of Electrical Connections: All temporary connections for electricity shall be subject to approval of the Engineer and the power company, and shall be removed in like manner at the Contractor's expense prior to final acceptance of the Work.

C. Separation of Circuits: Unless otherwise permitted by the Engineer, circuits separate from lighting circuits shall be used for all power purposes.

D. Construction Wiring: All wiring for temporary electric light and power shall be properly installed and maintained and shall be securely fastened in place. All electrical facilities shall conform to the requirements of Title 8, Industrial Relations, Subchapter 5, Electrical Safety Orders, California Administrative Code; and Subpart K of the OSHA Safety and Health Standards for Construction.

3.03 INSTALLATION OF POWER DISTRIBUTION SYSTEM

A. Power: The Contractor shall provide all necessary power required for its operations under the Contract at no additional cost to the District.

B. Temporary Power Distribution: The Contractor shall provide a weatherproof, grounded, temporary power distribution system sufficient to accommodate performance of entire Work of the Contract, including but not necessarily limited to operation of test equipment and test operation of systems which cannot be delayed until permanent power connections are operable; temporary operation of other temporary facilities, including permanent equipment and systems which must be placed in operation prior to use of permanent power connections (pumps and similar equipment); and power for temporary operation of existing facilities (if any) at the site during change-over to new permanent power system. Provide circuits of adequate size and proper power characteristics for each use; run circuits wiring generally overhead, and rise vertically in locations where it will be least exposed to possible damage from construction operations, and result in least interference with performance of the Work; provide rigid steel conduit or equivalent raceways for wiring which must be exposed on grade, floors, decks, or other recognized exposures to damage or abuse.

C. Provide power outlets for the Contractor's operations, with transformers, branch wiring and distribution boxes located safely and conveniently for the proposed construction activities. Provide flexible power cords as required.

D. Maintain main service disconnect and overcurrent protection at source distribution equipment.

3.04 INSTALLATION OF LIGHTING

A. Construction Lighting: All work conducted at night or under conditions of deficient daylight shall be suitably lighted to insure proper work and to afford adequate facilities for inspection and safe working conditions.

B. Temporary Lighting: The Contractor shall provide a general, weatherproof, grounded temporary lighting system in every area of construction work, as soon as is practically feasible and provide

sufficient illumination for safe work and traffic conditions; and run circuit wiring generally overhead, and rise vertically in locations where it will be least exposed to possible damage from construction operations on grade, floors, decks, or other recognized areas of possible damage or abuse.

C. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.

D. Maintain lighting and provide routine repairs.

3.05 INSTALLATION OF SANITARY FACILITIES

A. Toilet Facilities: Fixed or portable chemical toilets shall be provided wherever needed for the use of Contractor's employees. Toilets at construction job site shall conform to the requirements of Subpart D, Section 1926.51 of the OSHA Standards for Construction.

B. Sanitary and Other Organic Wastes: The Contractor shall establish a regular daily collection of all sanitary and organic wastes. All wastes and refuse from sanitary facilities provided by the Contractor or organic material wastes from any other source related to the Contractor's operations shall be disposed of away from the site in a manner satisfactory to the Engineer and in accordance with all laws and regulations pertaining thereto.

3.06 OPERATIONS AND TERMINATIONS

A. Inspections: Prior to placing temporary utility services into use, the Contractor shall inspect and test each service and arrange for governing authorities' required inspection and tests, and obtain required certifications and permits for use thereof.

B. Protection: The Contractor shall maintain distinct markers for underground lines, and protect from damage during excavating operations.

C. Termination and Removal: When need for a temporary utility service or a substantial portion thereof has ended, or when its service has been replaced by use of permanent services, or not later than time of substantial completion, the Contractor shall promptly remove installation unless requested by the Engineer to retain it for a longer period. The Contractor shall complete and restore the Work which may have been delayed or affected by installation and use of temporary utilities, including repairs to construction and grades and restoration and cleaning of exposed surfaces.

END OF SECTION

SECTION 01530

PROTECTION OF WORK, PROPERTY AND EXISTING FACILITIES

PART 1 – GENERAL

1.01 DESCRIPTION

A. The Contractor shall be responsible for taking all precautions, providing all programs, and taking all actions necessary to protect the Work and all public and private property and facilities from damage as specified in the General Conditions and herein.

B. In order to prevent damage, injury or loss to persons or property, the Contractor's actions shall include, but not be limited to, the following:

1. Store materials, supplies and equipment in an orderly and safe manner that will not unduly interfere with the progress of the Work or the work of any other contractor or utility service company.

2. Provide suitable storage facilities for all materials which are subject to theft or damage due to weather exposure, breakage or otherwise.

3. Place upon the Work, or any part thereof, only such loads as are consistent with the safety of that portion of the Work.

4. Frequently clean up all refuse, debris and scrap materials caused by operations to provide a safe, orderly and workmanlike appearance at all times at the site of the Work. Unless otherwise approved, the Contractor shall perform clean up on a daily basis.

5. Provide barricades and guard rails around openings, for scaffolding, for temporary stairs and ramps, around excavations, elevated walkways and other hazardous areas.

C. The Contractor shall not, except after written consent from proper parties, enter or occupy privately-owned land with workers, tools, materials or equipment except on District’s easements therein.

D. The Contractor shall assume full responsibility for the preservation of all public and private property or facility on or adjacent to the site. If any direct or indirect damage is done by or on account of any act, omission, neglect or misconduct in the execution of the Work by the Contractor, it shall be restored by the Contractor to original condition or better than existing prior to damage at the Contractor’s expense.

E. Payment for the Work of this Section shall be included as part of the lump sum or unit price bid amount for which such Work is appurtenant thereto.

PART 2 – PRODUCTS

2.01 UNDERGROUND STRUCTURES

A. Underground structures are defined to include, but are not limited to, all sewer, water, gas, storm drains, manholes, chambers, electrical conduits, tunnels and other piping or subsurface work located within or adjacent to the limits of the Work.

B. All underground structures known to the Engineer are shown to the extent of available information but are not guaranteed to be correct or complete.

C. Water, sewer, electric, gas, telephone and cable television service connections, if shown, are considered approximate and their locations shall be determined by the Contractor and the utility owner prior to construction.

D. The Contractor shall explore ahead of trenching or excavation work and shall uncover all proposed connection points on existing structures or pipes; obstructing; or adjacent underground structures sufficiently to determine their location, to prevent damage to them, and to prevent interruption of service which such structures provide. The Contractor shall immediately notify the District in the event that existing utilities differ from the locations shown on the Drawings. The Contractor shall restore any underground structures damaged by the Contractor's operations to original condition at no additional cost to the District.

E. Necessary changes in the location of the Work may be made by the Engineer to avoid unanticipated underground structures.

F. If permanent relocation of an underground structure is required and is not otherwise provided for in the Contract Documents, the Engineer will order the Contractor in writing to perform the work which shall be paid for under the provisions of the General Conditions.

G. The Contractor shall notify U.S.A. Dig Alert at 811 a minimum of two working days prior to any excavation.

2.02 SURFACE STRUCTURES

Surface structures are defined as all existing buildings, tanks, walls, bridges, roads, dams, channels, open drainage, piping, poles, pedestals, transformers, wires, posts, signs, markers, curbs, walks and all other facilities that are visible above the ground surface and including their foundations or any extension below the surface.

PART 3 – EXECUTION

3.01 GENERAL

A. Replace existing improvements such as curbs and gutters; fences; signs; paved surfaces; etc. that are cut, removed, damaged, or otherwise disturbed by the construction with new, in-kind improvements.

B. Where utilities are parallel to or cross the pipeline trench but do not conflict with the permanent work to be constructed, follow the procedures given below and as indicated on the Drawings. For utility crossings not shown on the Drawings, follow the General Provisions and the instructions of the Engineer.

C. Notification: Notify the utility owner 48 hours in advance of the crossing construction and coordinate the construction schedule with the utility owner's requirements.

D. Exposing Utilities in Advance: It shall be the Contractor's responsibility to determine the true location and depth of utilities and service connections which may be affected by or affect the work. Determine the type, material, and condition of these utilities. In order to provide sufficient lead time to resolve unforeseen conflicts, order materials and take appropriate measures to ensure that there is no delay in work, the Contractor shall expose all utilities 1,300 linear feet in advance of the pipeline construction.

E. Protect in Place: Protect utilities in place, unless abandoned, and maintain the utility in service, unless otherwise specified.

F. Cut and Plug: Cut abandoned utility lines and plug the ends with a concrete plug in accordance with SSPWC Section 306-5. Dispose of the cut pipe as unsuitable material. Do not cut asbestos cement pipe; refer to Section 01170 for the procedure for the removal of asbestos cement pipe.

G. Remove and Reconstruct: Where necessary or as required by the District's Representative, remove the utility and, after passage, reconstruct it with new materials. Provide temporary service for the disconnected utility.

H. Cultivated or planted areas and other surface improvements which are damaged by actions of the Contractor shall be restored as nearly as possible to their original condition at the Contractor's expense. Existing guard posts, barricades, driveways and fences shall be protected and replaced if damaged.

I. Vitrified Clay Sewer Pipe and Couplings: For sewer pipe eight inches in diameter or under, replacement shall consist of plain-end pipe conforming to ASTM C700. Compression coupling shall conform to ASTM C594; Band seal couplings or approved equal. At least two lengths of pipe shall be used in crossing the trench section.

3.02 PROTECTION OF EXISTING STRUCTURES

A. Protection of Underground and Surface Structures:

1. The Contractor shall sustain in their places and protect from direct or indirect damage all underground and surface structures located within or adjacent to the limits of the Work. Such sustaining and supporting shall be done carefully and as required by the party owning or controlling such structure. Before proceeding with the work of sustaining and supporting such structure, the Contractor shall satisfy the Engineer that the methods and procedures to be used have been approved by the party owning same.

2. The Contractor shall assume all risks attending the presence or proximity of all underground and surface structures within or adjacent to the limits of the Work.

The Contractor shall be responsible for all damage and expense for direct or indirect damage caused to any structure. The Contractor shall immediately repair all damage to the satisfaction of the owner of the damaged structure.

B. All other existing surface facilities, including but not limited to, guard rails, posts, guard cables, signs, poles, markers and curbs which are temporarily removed to facilitate installation of the Work shall be replaced and restored to their original condition at Contractor's expense.

C. Adjacent Parallel Utilities: Protect existing parallel utilities from any disturbances and repair the lines and associated appurtenances if they are damaged in any way. All costs incurred for protection of utilities or any costs incurred due to the presence of the lines, whether or not they lie within the new construction, shall be borne in full by the Contractor.

3.03 PROTECTION OF INSTALLED PRODUCTS

A. The Contractor shall provide protection of installed products to prevent damage from subsequent operations. Remove protection facilities when no longer needed prior to completion of the Work.

B. The Contractor shall control traffic to prevent damage to equipment, materials and surfaces.

3.04 COMPACTION

A. Utilities Protected in Place: Backfill and compact under and around the utility so that no voids are left. For existing utilities that are concrete encased, use cement-sand slurry conforming to this Section for backfill around the utility unless otherwise specified by the utility owner.

B. Utilities Reconstructed: Prior to replacement of the utility, the trench shall be backfilled and compacted by approved means to an elevation one foot above the top of the ends of the utility. A cross trench of the proper width shall be excavated for the utility and it shall be laid, backfilled, and compacted as specified herein or as required by the Engineer.

C. Cement-Sand Slurry: Slurry consisting of one sack (94 pounds) of portland cement per cubic yard of sand and sufficient moisture for workability may be required for backfill to aid in reducing compaction difficulties. Submit specific methods and procedures for the review of the District's Representative prior to construction.

3.05 PROTECTION OF SURVEY OR ROADWAY MARKERS

The Contractor shall not destroy, remove or otherwise disturb any existing survey markers or other existing street or roadway markers without proper authorization. No pavement breaking or excavation shall be started until all survey or other permanent marker points that will be disturbed by the construction operations have been properly referenced for accurate restoration. It shall be the Contractor's responsibility to notify the proper representatives of the District of the time and location that such work will be done. Such notification shall be in advance of construction to avoid delay due to referencing survey points for restoration. All survey markers or points

disturbed without proper authorization by the Engineer may be restored by the District at the Contractor's expense after all street or roadway resurfacing has been completed.

3.06 RESURFACING

A. The Contractor shall promptly place temporary surfacing on all areas where existing surfacing has been disturbed and shall maintain such surfacing for the duration required by the Engineer. Temporary resurfacing shall be constructed in accordance with the following requirements.

1. The subgrade shall be uniformly watered sufficiently to eliminate dust, but not to such extent as to form mud or pools of water. The street and surrounding area shall be cleared of rubbish and debris. The street shall be swept and the surrounding area shall be cleaned thoroughly.

2. The temporary surfacing shall then be spread over the prepared subgrade and rolled with not less than an 8-ton tandem roller in such a manner that, after rolling, the temporary surfacing shall present a smooth surface for traffic, shall not be less than 2 inches in compacted thickness and shall be maintained free from bumps and depressions until permanent surfacing is placed. The finished surface of said temporary surfacing shall be flush with the adjoining pavement grade.

3. The Contractor shall store sufficient temporary surfacing material at the job site for necessary repairs to the temporary surfacing already placed.

4. The temporary surfacing shall be left in place until permanent surfacing is constructed.

5. No separate payment shall be made for temporary surfacing and all costs shall be included with the associated items of the Work.

B. Unless otherwise specified, roads in which the surface is removed, broken, or damaged, or in which the ground has caved or settled during the work under this contract, shall be resurfaced and brought to the original grade and section. Roadways used by the Contractor shall be cleaned and repaired on a weekly basis as directed by the Resident Engineer.

C. Pavement surfaces which have been damaged due to the Contractors operations shall be restored to their original condition at no additional cost to the District where such damage could have been reasonably expected, in the sole opinion of the Engineer, and the Contractor failed to implement measures to prevent the damage.

3.07 PROTECTION OF TREES AND LANDSCAPING

A. The Contractor shall exercise all necessary precautions so as not to damage or destroy any trees, shrubs or other existing landscaping including those lying within or beyond street right-of-way and project limits.

B. The Contractor shall not trim or remove any vegetation unless approved for trimming or removal by the jurisdictional agency or District.

C. All existing trees and landscaping which are damaged during construction shall be trimmed or replaced by the Contractor or a certified landscape company under permit from the jurisdictional agency or District and to the satisfaction of said agency and/or the District. All costs shall be borne by the Contractor.

3.08 REPLACEMENT IN KIND WITH NEW

Except as indicated or as specifically authorized by the District's Representative, reconstruct utilities or improvements with new material of the same size, type, and quality as that removed.

END OF SECTION

SECTION 01540

SECURITY

PART 1 - GENERAL

1.01 DESCRIPTION

A. The Contractor(s) shall safely guard all work, materials, equipment and property from loss, theft, damage and vandalism. Contractors' duty to safely guard property shall include the District's property and other private property from injury or loss in connection with the performance of the Work.

B. The Contractor shall employ watchmen as needed to provide the required security and prevent unauthorized entry.

C. The Contractor may make no claim against the District for damage resulting from trespass.

D. The party responsible for security shall make good all damage to property of District and other arising from failure to provide adequate security.

E. If existing fencing or barriers are breached or removed for purposes of construction, the Contractor shall provide and maintain temporary security fencing equal to the existing in a manner satisfactory to the District's Representative.

F. Security measures taken by the Contractor(s) shall be at least equal to those usually provided by the District to protect the existing facilities during normal operation.

G. A security program shall be maintained throughout construction until final acceptance and occupancy precludes need for Contractor's security program.

1.02 CONTRACTOR'S ACCESS TO THE SITE

A. Access to the site for Contractor's employees, material, tools, and equipment shall be as directed by the District's Representative.

B. The Contractor shall ensure that each of its employees, representatives, material suppliers and others acting for the Contractor shall be subject to the following:

1. No Contractor employee's personal vehicle shall be allowed to park anywhere other than the Contractor Employee's Parking Area. The Area shall be designated by the District's Representative. The Contractor shall prepare and maintain this area as required.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01560

TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 - GENERAL

1.01 DESCRIPTION

A. The Contractor shall provide and maintain temporary methods, procedures, equipment and work as necessary to provide controls over environmental conditions at the site of the Work and adjacent areas. All physical evidence of temporary facilities shall be removed and areas restored to their original condition upon completion of the Work.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Section 02270 – Temporary Soil Erosion and Sediment Control

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 LAYDOWN AREAS

A. Laydown areas shall be established as necessary in coordination with the District or its representative.

3.02 NOISE CONTROL

The Contractor shall comply with all local sound control and noise level rules, regulations and ordinances during the performance of the Work. Noise levels shall conform to the latest OSHA standards and in no case will noise levels which interfere with the District's work or operations, or the work of others, be permitted.

A. Each internal combustion engine that is used for any purpose on the job or related to the job shall be equipped with a muffler of a type recommended by the manufacturer, and no internal combustion engine shall be operated at the site of the Work without said muffler.

B. If the Contractor is allowed to work outside the normal work hours, the noise level generated by the Contractor's operations between the hours of 6:00 p.m. and 6:00 a.m. shall not exceed 70 dBA at a distance of fifty (50) feet. This requirement in no way relieves the Contractor from responsibility for complying with more stringent local ordinances regulating noise level. Said noise level requirements shall apply but not be limited to trucks, transmit mixers or transient equipment that may or may not be owned by the Contractor.

3.03 DUST CONTROL

The Contractor shall control the occurrence of objectionable dust during earthwork operations or any other activity. The Contractor shall apply water and calcium chloride, or use other methods

approved by the Engineer, to reduce the occurrence of airborne dust to the maximum extent practicable.

3.04 PEST AND RODENT CONTROL

The Contractor shall provide rodent and pest control as necessary to prevent infestation of construction or storage areas. Employ methods and use materials which will not adversely affect conditions at the site or on adjoining properties.

3.05 WATER CONTROL

A. The Contractor shall provide, operate and maintain equipment and facilities of adequate size to control surface water and water from excavations and structures in order to prevent damage to the Work, the site, or adjoining properties.

1. Control fill, grading and ditching to direct water away from excavations, pits, tunnels and other construction areas and to direct drainage to suitable drainage facilities to prevent erosion, nuisance flows or damage.

B. The Contractor shall dispose of drainage water in a manner to prevent flooding, erosion or other damage to the Work, any portion of the site or to adjoining areas in conformance with all environmental requirements.

C. The Contractor shall comply with the District's SWRCB Order WQ 2014-0194-DWQ, General Order No. CAG140001 as part of the Statewide National Pollutant Discharge Elimination System (NPDES) Permit for Drinking Water System Discharges to Waters of the United States.

3.06 POLLUTION CONTROL

A. The Contractor shall provide methods, means and facilities required to prevent contamination of soil, water or atmosphere by the discharge of noxious substances resulting from construction operations.

B. The Contractor shall provide equipment and personnel and perform emergency measures required to contain any spillages, and to remove soils or liquids contaminated as a result of the Contactor's activities.

1. Excavate and legally dispose off-site any contaminated soil or liquid and replace with suitable compacted fill and topsoil.

C. The Contractor shall take special measures to prevent harmful substances from entering public waters.

1. Prevent the disposal of wastes, effluents, chemicals or other such substances adjacent to or into streams or in sanitary or storm sewers.

D. The Contractor shall provide systems for the control of atmospheric pollutants.

1. Prevent toxic concentrations of chemicals.

2. Prevent harmful dispersal of pollutants into the atmosphere.

END OF SECTION

SECTION 01570

TRAFFIC REGULATIONS

PART 1 - GENERAL

1.01 GUIDANCE

A. Traffic Control permits, notifications, mobilization, temporary signs, barriers, lights, flagging personnel, striping, markings, and demobilization and removal.

1.02 CONSTRUCTION IN PUBLIC ROADWAYS

A. CONTRACTOR shall prepare traffic control plans for any work impacting the public Right-of-Way (ROW) or adjacent to the public ROW. CONTRACTOR shall submit a Right-of-Way Permit (ROW Permit) to the City and/or County Jurisdiction for which the project is located supplemented with Traffic Control Plan(s) (TCPs) for each separate portion or phase of the project. The TCP is not valid until plans and a ROW Permit are approved and issued.

B. Traffic Control Plans shall be per the latest editions of the California Manual on Uniform Traffic Control Devices (California MUTCD or CA MUTCD) Standards and Traffic Control Guidelines of the City and/or County jurisdiction for which the project is located. CONTRACTOR shall provide signs, signals, barricades, flares, lights and all other equipment, service and personnel required to regulate and protect all traffic and warn of hazards. All such work shall conform to requirements of the CITY and/or COUNTY. Remove temporary equipment and facilities when no longer required, restore grounds to original, or to specified conditions.

C. Work hours on most streets shall be restricted between the hours of 7:00 AM and 5:00 PM, unless approved by the CITY and/or COUNTY and DISTRICT. Arterial streets may require night work. All night work will require written approval from the City and/or County. Lane closures, road closures, and traffic signal modifications associated with overnight construction activities will require warning signs to be placed at least one week in advance of starting construction.

D. All open trenches shall be covered with a recessed, traffic bearing non-skid plates during nonworking hours according to this Specification.

1.03 CONSTRUCTION PARKING CONTROL

A. Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, access to property, and DISTRICT AND CITY and/or COUNTY operations.

B. Submit a plan for parking of construction personnel’s vehicles to the DISTRICT for approval. No personal vehicles will be permitted beyond the approved designated construction parking area.

C. Prevent parking on or adjacent to access roads or in non-designated areas.

1.04 LAYDOWN AREAS

A. Laydown areas (construction staging areas) shall be established as needed in accordance with any requirements of the District Engineer.

B. Laydown areas in the public right-of-way shall be approved by the agency having jurisdiction over the right-of-way.

1.05 TRAFFIC CONTROL

A. Vehicular and Pedestrian Access: The Contractor's operations shall cause no unnecessary inconvenience to the public, including trash, mail, and other services provided to the public over the County rights-of-way and private streets. The access rights of the public shall be considered at all times, and vehicular and pedestrian traffic shall be permitted to pass on public rights of way or private streets through the work at all times, unless the Contractor receives prior written approval of a detour plan from the Engineer. The Contractor shall provide at least seventy-two (72) hours written notice to the Engineer requesting approval of a detour plan, prior to the performance of any work or the establishment of any detour or closure in the public right-of-way or private streets. The Contractor shall notify the occupants or owners of all affected properties at least forty-eight (48) hours prior to any temporary obstruction of access.

B. Safe and adequate pedestrian and vehicular access shall be provided and maintained to fire hydrants, commercial and industrial establishments, churches, schools, parking lots, service stations, motels, fire and police stations, hospitals, and establishments of similar nature. Access to these facilities shall be continuous and unobstructed unless prior approval of a detour plan is received from the Engineer.

C. Safe and adequate pedestrian zones and public transportation stops, as well as pedestrian crossings of the work at intervals not exceeding 300 feet (90 m), also shall be maintained unless prior approval of a detour plan is received from the Engineer.

D. Vehicular access to residential driveways shall be maintained to the property line unless prior approval of a detour plan is received from the Engineer. This applies for both public right of ways and private roads.

E. The Contractor shall cooperate with owners and occupants of affected properties as well as other parties involved in providing services to the public (trash collection, mail delivery, etc.), in order to maintain existing schedules for these services. This applies for both public right of ways and private roads.

F. Grading operations, roadway excavation and fill construction shall be conducted by the Contractor in a manner to provide a reasonably satisfactory surface for traffic. When rough grading is completed, the roadbed surface shall be brought to a smooth, even condition satisfactory for traffic. This applies for both public right-of-ways and private roads.

G. Unless otherwise authorized, work shall be performed in only one-half of the roadway at one time. One-half shall be kept open and unobstructed until the opposite side is ready for use. If one-half a street only is being improved, the other half shall be conditioned and maintained as a detour. This applies for both public right-of-ways and private roads.

H. The Contractor shall provide barricades, flagmen, signs and other items required to ensure the safety of the public. The Contractor shall adhere to the traffic plans included in the Contract Documents, unless so otherwise directed by the Construction Manager.

I. The Contractor shall maintain two-way traffic flow at all times, unless otherwise directed by the Inspector.

J. Trenches shall be backfilled or trench-plated at the end of each workday. Trenches left open during non-working hours are allowed only at the stopping-starting point. Trench plates shall be recessed by grinding the pavement down on either side of the trench. The grinding depth shall be as deep as necessary to ensure the top of the trench plate is flush with the adjacent finish surface.

a. Trench plates shall be pinned using approved non-obtrusive material.

b. If more than one plate is used to cover a trench opening, the plates shall be welded together at abutting joints.

c. Warning signs reading “STEEL PLATES AHEAD” shall be placed for on-coming vehicular and pedestrian traffic as directed by the AGENCY.

d. In no case shall more than three (3) standard length plates be allowed in one location.

e. CONTRACTOR shall submit a drawing and written description of the method to completely install and remove the recessed trench plates per the Specifications. The recessed plate submittal will include, but not be limited to, plate size, thickness and load capacity, non-skid material, pinning mechanism, bracing system, including shoring system for trench walls, length of plate outside of trench line, typical warning signage and welding method, temporary hot mix AC upon removal, and grinding and final AC paving.

1.06 DETOUR PLANS

A. The Contractor shall submit a detour plan for approval by the Agency having jurisdiction of the right-of-way which shall include, at a minimum, the following requirements unless specifically approved otherwise by the Agency:

1. Unless authorized by the Agency, no less than a twelve foot (12’) wide traffic lane shall be provided for each direction of travel on all streets at all times. The traffic lane shall be provided for each direction of travel on all streets at all times. The traffic lanes shall be maintained on pavement, and shall remain unobstructed. Lane transitions shall not be sharper than a taper of thirty to one (30:1).

2. Unless authorized by the Agency, clearances from traffic lanes shall be no less than five feet (5’) to the edge of any excavation and no less than two feet (2’) to the face of any curb, pole, barricade, delineators, or other vertical obstruction.

3. Where applicable, one four foot (4') wide paved pedestrian walkway shall be maintained in the parkway area on each side of all streets. The clearance from the pedestrian walkway to any traffic lane shall be five feet (5').

4. Traffic control warning signs, lights, and devices shall conform to the least edition California Department of Transportation, Traffic Control Manual and supplemental revisions.

5. The Contractor shall provide barriers, guards, lights, signs, temporary bridges, flagpersons and watchpersons, advising the public of detours and construction hazards. The Contractor shall also be responsible for compliance with additional public safety requirements which may arise during construction. The Contractor shall furnish and install, and upon completion of the work, promptly remove all signs and warning devices.

6. At least forty-eight (48) hours in advance of closing, or partially closing, or of reopening, any street, alley, or other public or private thoroughfare, the Contractor shall notify the Police, Fire, Traffic and Engineering Departments of jurisdictional agencies involved, and comply with their requirements. Deviations must first be approved in writing by the Agency.

7. The Contractor shall secure approval, in advance, from authorities concerned, for the use of any bridges proposed by it for public use. Temporary bridges shall be clearly posted as to load limit, with signs and posting conforming to current requirements set forth in the Traffic Manual published by the California Department of Transportation, covering "signs". This manual shall also apply to the street closures, barricades, detours, lights, and other safety devices required.

8. Temporary traffic channelization shall be accomplished with barricades or delineators. Temporary striping will not be allowed unless specifically permitted by the Agency. The Contractor shall prepare any plans that may be required for temporary striping to the satisfaction of the Engineer. In no event will temporary striping on pavement surfaces be allowed to remain.

1.07 TRAFFIC CONTROL DEVICE MAINTAINENCE

A. All traffic control devices shall be maintained 24 hours per day, 7 days a week, by the CONTRACTOR.

PART 2 - PRODUCTS

2.01 SIGNS, SIGNALS, AND DEVICES

A. Traffic control warning signs, lights, and devices shall conform to the most recent edition of the California Manual on Uniform Traffic Control Devices (California MUTCD).

B. All signs and barricades shall be illuminated or reflectorized when they are used during hours of darkness. All delineators, cones, barricades or posts used in the diversion of traffic shall be provided with flashers or other satisfactory illumination if in place during darkness. Internally or externally illuminated signs shall be used where there is

significant interference from extraneous light sources and reflectorized signs will not be effective. External light sources shall be properly shielded to protect drivers from glare.

C. The signing, barricading, and diverting of traffic shall be subject to the CONTRACTOR'S approved TCPs and ROW Permit. The CONTRACTOR shall maintain a 24-hour emergency service to remove, install, relocate and maintain warning devices and shall furnish to the CITY and/or COUNTY and DISTRICT names and telephone numbers of three persons responsible for this emergency service. In the event these persons do not promptly respond when notified by the CITY, COUNTY, AND/OR DISTRICT, the CITY, COUNTY, AND/OR DISTRICT reserves the right to call other forces to accomplish such required emergency service, and the CONTRACTOR will be held responsible for any and all costs incurred by the DISTRICT.

PART 3 - EXECUTION

3.01 FLAGPERSONS

A. Per CA MUTCD, provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes, or as required by local jurisdictions.

3.02 FLARES AND LIGHTS

A. Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.

3.03 HAUL ROUTES AND SITE ACCESS

A. Confine construction traffic to designated haul routes.

B. Provide traffic control at critical areas of haul routes to regulate traffic and to minimize interference with public traffic.

3.04 TRAFFIC SIGNS AND SIGNALS

A. Install traffic signs and signals at approaches to site and on site, at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.

B. Install and operate traffic control to direct and maintain orderly flow of traffic in areas under CONTRACTOR'S control, and areas affected by CONTRACTOR'S operations.

C. Relocate as work progresses, to maintain effective traffic control.

D. Work that disturbs normal traffic signal timing operations or detection shall be coordinated with the Agency 72 hours prior to commencing work.

E. All traffic control devices shall be removed from view or covered when not in use.

3.05 REMOVAL

A. Remove equipment and devices when no longer required.

B. Repair damage caused by installation.

C. The CONTRACTOR shall obtain verification from the Agency that the complete traffic control system has been satisfactorily removed and that all necessary repairs have been successfully completed.

END OF SECTION

SECTION 01610

TRANSPORTING AND HANDLING MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.01 DESCRIPTION

The Contractor shall make all arrangements for transportation, delivery and handling of equipment and materials required for the Work.

1.02 DELIVERY

A. Shipments shall not be delivered to the District except where otherwise directed.

B. Shipments shall be addressed and consigned to the proper party including the name of Project and complete.

C. Shipments of materials to the Contractor or Subcontractors shall be delivered to the site only during regular working hours.

D. Arrange deliveries of products according to construction schedules and with ample time to facilitate inspection prior to installation.

E. Coordinate deliveries to avoid conflict with the Work and site conditions and to accommodate the following:

1. The work of the District and the District’s use of the premises.

2. Limitations of storage space.

3. Availability of equipment and personnel for product handling.

F. Do not have products delivered to the project site until related Shop Drawings are approved by the Engineer and required storage facilities are available.

G. Deliver products in manufacturer's original, unopened, labeled containers. Keep the Engineer informed of delivery of all equipment to be incorporated in the Work.

H. Partial deliveries of component parts of equipment shall be clearly marked to identify the equipment and to facilitate storage and assembly.

I. Immediately upon delivery, inspect shipments to assure:

1. Product complies with the requirements of the Contract Documents and reviewed submittals.

2. Quantities are correct.

3. Containers and packages are intact and labels are legible.

4. Products are undamaged and properly protected.

1.03 HANDLING

A. Provide equipment and personnel necessary to handle products including those provided by the District.

B. Provide additional protection during handling as necessary to prevent soiling, scraping, marring or otherwise damaging products, packaging or surrounding surfaces.

C. Handle products by methods to prevent bending or overstressing.

D. Lift heavy components only at designated lifting points.

E. Materials and equipment shall at all times be handled in a safe manner and as recommended by the manufacturer or supplier to prevent damage. Do not drop, roll or skid products off delivery vehicles. Hand carry or use suitable handling equipment.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01620

STORAGE OF MATERIAL

PART 1 - GENERAL

1.01 DESCRIPTION

The Contractor shall make all arrangements and provisions necessary for the storage and protection of materials and equipment in accordance with the manufacturer's recommendations and the requirements of the Contract Documents.

1.02 STORAGE LOCATIONS AND ACCESS

A. Areas available for storage of material and equipment on the construction site shall be as shown on the Drawings or approved by the Engineer. The Contractor shall not store products in the structures being constructed unless approved in writing by the Engineer.

B. Lawns or private property shall not be used for storage purposes without written permission of the District or other person in possession or control of such premises.

C. Materials and equipment which are to become the property of the District shall be stored to facilitate their inspection and for preservation of the quality and fitness of the Work including proper protection against damage by freezing and moisture. They shall be placed in enclosed storage areas unless otherwise approved by the District.

D. All excavated materials, construction equipment, and materials and equipment to be incorporated into the Work shall be stored to prevent damage to any part of the Work or existing facilities, and to allow access at all times to all parts of the Work and to all public utility installations in the vicinity of the Work. Materials and equipment shall be kept neatly and compactly stored in locations that will cause a minimum of inconvenience to other contractors, public travel, and adjoining owners and/or occupants.

E. The Contractor shall not open manufacturer’s containers until time of installation unless recommended by the manufacturer or otherwise specified.

F. The Contractor shall be fully responsible for loss or damage to stored materials and equipment.

1.03 UNCOVERED STORAGE

A. The following types of materials may be stored outdoors without cover:

1. Masonry units

2. Reinforcing and structural steel

3. Metal piping

4. Castings

5. Chemical storage containers

B. Store the above materials on wood blocking to prevent contact with the ground.

1.04 COVERED STORAGE

A. The following types of materials may be stored outdoors if covered with material impervious to water:

1. Pumps and valves

2. Plastic Piping

3. Plastic Pipe Fittings

B. The Contractor shall tie down and slope covers to prevent the accumulation of water on covers.

C. The Contractor shall store materials on wood blocking.

1.05 FULLY PROTECTED STORAGE

A. The Contractor shall protect mechanical and electrical equipment from being contaminated by dust, dirt and moisture.

B. The Contractor shall maintain humidity at levels recommended by manufacturers for electrical and electronic equipment.

1.06 MAINTENANCE OF STORAGE

A. The Contractor shall periodically inspect stored products on a regular basis to assure that:

1. The condition of the storage facility is adequate to provide the required conditions.

2. The required environmental conditions are maintained on a continuing basis.

3. The products which are exposed to elements are not adversely affected.

B. If necessary to move stored materials and equipment during construction, the Contractor shall move or cause to be moved materials and equipment without additional compensation from the District.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01700

PROJECT CLOSEOUT

PART 1 - GENERAL

1.01 DESCRIPTION

A. Contract Closeout is the process that commences as the Work nears Substantial Completion. It continues through Substantial Completion, and Final Acceptance of the Work.

B. This specification section defines the overall changeover process from construction (by the Contractor) to operations (by the District). This section defines the terms in this process, and outlines the responsibilities of the Contractor, the Engineer, and the District.

1.02 CONTRACT CLOSEOUT SEQUENCE OF EVENTS

A. The sequence of events and their description listed below represent the suggested order of activities as the Contract proceeds from construction, through checkout, testing, Substantial Completion, and the Notice of Completion. Not all work will proceed in this exact order. Adjustments may be made, after approval by the Engineer, for the mutual benefit of the Contractor and the District, if the situation so warrants. Any adjustment made in the sequence of events, to accommodate the Contractor, shall be at no additional cost to the District.

B. Closeout Sequence of Events and Description:

1. Work Nears Completion - Signifies the start of testing. The Contractor shall indicate when work is ready for testing on a facility and/or system basis.

2. Contract Closeout Deliverables - The Contractor shall provide the following:

    a. Final as built Redline Drawings.

    b. All Unconditional Waivers and Release Upon Final Payment to Subcontractor submitted to the District.

    b. Written guarantees, where required.

    c. Maintenance stock items; spare parts; special tools.

    d. Certificates of inspection and acceptance by local governing agencies having jurisdiction.

3. Pre-Final Inspection and Discrepancy List - The Engineer will conduct a pre- final inspection of the Work prior to substantial completion. The Engineer will prepare a discrepancy list (punchlist). The discrepancy list includes items of work which do not conform to the Contract Documents, plus any additional items found to be missing, incomplete, damaged, incorrect, or constructed in an unworkmanlike manner. The Contractor shall correct all items on the discrepancy list.

4. Substantial Completion - Following correction of items on the discrepancy list and successful completion of the operational demonstration, the Contractor shall notify the Engineer that the Work is substantially complete.

5. Final Inspection - Following written notice from the Contractor that the entire Work is complete the Engineer, the District, the Contractor will conduct a final inspection to verify that the Work is complete. The Engineer will prepare a final punchlist of all outstanding items.

6. Final Payment - After the Contractor has completed all final punchlist items, and completed all other requirements, the Contractor shall submit a final application for payment to the Engineer. The final payment application will include all necessary documentation, in addition to waivers or releases of all liens filed in connection with the Work. The Contractor shall specifically release the District from any claims not specifically renewed on the final application for payment. After acceptance by the Engineer and the District, the District will make final payment to the Contractor after deducting all amounts to be retained under the provisions of the Contract Documents.

7. Notice of Completion - The District will file a Notice of Completion with the County Recorder to begin the thirty-day (30-day) stop notice-filing period.

8. Release of Retention - Not more than thirty-five (35) days after filing the Notice of Completion, the District will release to the Contractor all retained funds, less any deductions to cover pending third party claims against the District.

1.03 SUBSTANTIAL COMPLETION:

A. Substantial Completion includes compliance with the following requirements:

1. The Contractor has, substantially completed the construction and erection of the Work in conformance with the Contract Documents.

2. The Contractor has installed, adjusted, and successfully tested Products, equipment, and systems. The facilities are constructed as indicated by the erection, installation, and operations and maintenance instructions of the Suppliers.

3. The Contractor has provided and completed the following items as approved by the Engineer:

a. Contract Closeout Deliverables.
b. Special Supplier's Warranties.

1.04 PRE-FINAL AND FINAL INSPECTIONS

A. Pre-final and final inspections are surveys of the Contractor's work by the Engineer, the District, and the Design Engineer to create a list of incomplete or unsatisfactory items of Work.

B. Prior to the pre-final and final inspections, the Contractor must complete the following:

1. Clean site; sweep paved areas, rake clean unpaved surfaces.

2. Remove waste and surplus materials, rubbish, fencing, equipment, temporary utilities, and construction facilities from the site.

C. The discrepancy list(s) and punchlist will include all items of work found to be unsatisfactory, missing, incomplete, damaged, incorrect, or improperly installed or constructed. Prior to Final Acceptance, the Contractor shall correct the punchlist items by re-work, modification, or replacement, at the option of the Engineer and at no additional cost to the District. The Engineer will re-inspect punchlist items upon notice by the Contractor that they are complete.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 FINAL CLEANUP

A. The Contractor shall promptly remove from the vicinity of the completed work, all rubbish, unused materials, concrete forms, construction equipment, and temporary structures and facilities used during construction. Final acceptance of the Work by the District will be withheld until the Contractor has satisfactorily complied with the foregoing requirements for final cleanup of the project site.

3.02 MAINTENANCE AND GUARANTEE

A. The Contractor shall comply with the maintenance and guarantee requirements contained in the General Conditions.

B. Replacement of earth fill or backfill, where it has settled below the required finish elevations, shall be considered as a part of such required repair work, and any repair or resurfacing which becomes necessary by reason of such settlement shall likewise be considered as a part of such required repair work unless the Contractor shall have obtained a statement in writing from the affected private owner or public agency releasing the District from further responsibility in connection with such repair or resurfacing.

C. The Contractor shall make all repairs and replacements promptly upon receipt of written order from the District. If the Contractor fails to make such repairs or replacements promptly, the District reserves the right to do the Work and the Contractor and his surety shall be liable to the District for the cost thereof.

3.03 BOND

A. The Contractor shall provide a bond to guarantee performance of the provisions contained in the General Conditions.

END OF SECTION

SECTION 01720

RECORD DOCUMENTS

PART 1 – GENERAL

1.01 DESCRIPTION

The Contractor shall maintain and provide record documents to the Engineer in accordance with this Section except where otherwise specified or approved in writing by the District.

1.02 MAINTENANCE OF DOCUMENTS

A. A bond copy of the Contract Drawings shall be furnished to the Contractor by the District. This copy shall be updated with record information and a "redline" copy of the updated record drawings shall be submitted to the Engineer every three months. The red line copy shall be up-to-date and its completeness shall be a pre-condition of the next month's partial payment request approval.

B. The Contractor shall maintain complete sets of the following record documents in the Contractor's field office and in a clean, dry and legible condition: Contract Drawings, Specifications, Addenda, approved Shop Drawings, Samples, photographs, Change Orders, Field Orders, test records, survey data, and all other modifications or data that are pertinent to the Work.

C. The Contractor shall provide files and racks for organization, storage and access. The filing format shall conform to Construction Specification Institute (CSI) format unless otherwise approved by the Engineer.

D. The Contractor shall make documents available at all times for inspection by the Engineer and the District.

E. The Contractor shall not use record documents for any other purpose or remove them from the Contractor's office without the Engineer's approval.

1.03 MARKING SYSTEM

A. The Contractor shall provide red pencils or felt tip pens for marking changes, revisions, or additions and deletions to the record documents.

1.04 RECORDING

A. The Contractor shall label each document "PROJECT RECORD" in 2-inch high printed letters.

B. The Contractor shall keep record documents current. Marking of the record documents shall be done at the time the material and equipment are installed.

C. The Contractor shall not permanently conceal any Work until the required information has been recorded. The Engineer may direct the Contractor to expose concealed Work if Work was not recorded on the record drawings.

D. Drawings: The Contractor shall legibly mark to record actual construction of the following items:

1. The Contractor shall label each document "RECORD DRAWINGS" in 2-inch high printed letters.

2. Record drawings shall incorporate addenda, supplementary drawings, working drawings, change orders and clarifications. As-built drawings shall incorporate survey notes, field notes and system demonstration logs.

3. Depths of various elements of foundation in relation to datum.

4. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.

5. The locations of internal utilities and appurtenances concealed in construction with reference to visible and accessible features or structures.

6. Field changes of dimensions and details.

7. Changes made by Change Order or Field Order.

8. Details not shown on original Drawings.

E. Specifications and Addenda: The Contractor shall legibly mark up each Section or document to record:

1. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.

2. Changes made by Change Order or Field Order.

3. Other matters not originally specified.

1.05 SUBMITTAL

A. The Contractor shall deliver record documents to the Engineer upon Substantial Completion of the Work. Final payment will not be made until record documents are deemed satisfactory by the Engineer.

B. The transmittal for record documents shall contain the following:

1. Date, project title and District’s project number.

2. The title and number of each record document.

3. The Contractor’s name, address, signature of authorized representative and certification that each document is complete and accurate as submitted.

C. The Contractor may submit additional 24” x 36” sheets detailing record work as approved by the Engineer.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION