

**METRO GOLD LINE Foothill Extension  
Construction Authority**

**Request for Bids (RFB)**

**UTILITY RELOCATION PROJECT  
RFB C2001**



**Issued July 5, 2017**

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**VOLUME 4- SPECIAL PROVISIONS**

# SPECIAL PROVISIONS

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### SECTION 1 - GENERAL CRITERIA

#### 1.1 SUMMARY OF THE WORK

- a) The Work consists of the construction of reinforced concrete encasement protection for existing sewer lines crossing the Authority ROW, steel split casing protection for existing waterlines crossing the Authority ROW, and abandonment of an existing waterline, with ancillary improvements, as shown on the Contract Drawings.
- b) The Contractor shall perform all services, provide all equipment and materials, and undertake all efforts necessary or appropriate to construct the Project in accordance with the requirements of the Contract Documents, all applicable Governmental Rules, all requirements of Utility Owners, all environmental mitigation items identified in Appendix 1, and all other applicable safety, environmental and other requirements, taking into account right-of-way constraints and other physical limits resulting from constraints affecting the Project, so as to achieve Substantial Completion and Final Acceptance by the deadlines specified in General Conditions Sections 4.9 and 4.10.
- c) The Contractor must obtain all Governmental Approvals necessary to perform the Work.

#### 1.2 SUBMITTALS

The Contractor shall be responsible for identifying submittal requirements under the Contract Documents and determining the date on which each submittal is required in conformity with the schedule of Work specified in General Conditions Section 5.3. Within 30 days after the effective date of NTP, the Contractor shall furnish a master list of submittals required by the Contract Documents, with corresponding submittal dates which match milestones listed in the schedule of Work, and allow for review and approval, as applicable, by the Authority and other required third parties.

The Contractor shall include, at a minimum, the following submittals in the master list of submittals:

- a) Construction Work Plans (CWP) – The Contractor shall have a Construction Work Plan (CWP) in place approved by the Authority as well as to any applicable Utility Owner and Governmental Person prior to the start of construction for individual Work elements or as specified by the Authority. The CWPs shall be presented and discussed at the readiness review meetings described in Section 1.6. The subject Work may not proceed until the CWP is approved by the Contractor's quality manager and safety representative, and the Authority. The Contractor shall submit a CWP at least 30 days prior to planned commencement of Work to the Authority as well as to any applicable Utility Owner and Governmental Person. At a minimum, CWPs shall address:
  - 1. Description of the Work and applicable Contract section.
  - 2. Staging plans.
  - 3. Actions that are defined as "special events" in that the Work may constitute exposing the general public to danger, inconvenience or risk.

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4. List of required submittals to complete the Work activity, including Approved for Construction plans, Specifications, approved materials submittals, working drawings, and Shop Drawing submittals.
  5. Individual(s) and position(s) responsible for supervision of the Work.
  6. Planned start date of the Work, progress rate expected and extended work hours required.
  7. Prerequisite activities required.
  8. Include a “Job Hazard Analysis” for the scope of work.
  9. Site specific safety issues, including safety equipment, access to location, and environmental considerations.
  10. Emergency response information.
  11. Inspection and/or tests to be accomplished.
  12. Inspection hold points.
- b) Shop Drawings in accordance with General Conditions Section 2.4 and these Special Provisions.
- c) Working Drawings – The Contractor’s plan for temporary equipment or structures such as shoring, decking, temporary bulkheads, support of excavation, support of Utilities, ground water control, sewer by-pass, and forming; and for such other Work as may be required for construction but do not become an integral part of permanent Work. Submit signed and stamped Working Drawings, and associated calculations for temporary Work which will not become a part of permanent structures included in the Project.
1. Provide cross-reference to construction drawing numbers. Use a Working Document sheet with a maximum size of 22 inches by 34 inches.
  2. Have Working Drawings prepared, stamped and signed by an engineer of the involved discipline, currently registered as a professional engineer in the State of California.
  3. Verify field measurements and coordinate with pertinent contract drawings from other contracts, where applicable.
  4. Do not begin the Work for which Working Drawings and associated calculations are required until drawings and calculations have been signed and stamped by the Contractor’s Designer of Record and have been reviewed and approved by the Authority.
- d) Governmental Approvals, third party inspection reports, third party sign-offs – Documentation that provides verification of all required third party permission to work

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and approval of the Work during performance of the Work and at Project completion.

- e) Certifications and Documentation - Certificates or certified test results that demonstrate proof of compliance with Specifications for products, materials, equipment, systems, and qualifications of personnel, manufacturers, fabricators and installers. Documentation required by the Contract Documents including miscellaneous items such as delivery tickets, batch tickets and bills of materials.
- f) Inspection and test procedures/reports - Test procedures for review and approval by the Authority and applicable Utility Owner before commencement of testing. Provide test reports in the accepted format for review by the Authority and applicable Utility Owner.
- g) Manufacturer/Product Data – Standard schematics and drawings, stamped calculations and data, and product data.
  - 1. Modify manufacturers' standard schematic drawings to delete information which is not applicable to the Contract. Supplement standard information with additional information applicable to the Contract.
  - 2. Modify manufacturers' standard catalog cuts, brochures, diagrams, schedules, performance charts, illustrations, calculations, and other descriptive data to delete information that is not applicable to the Contract. Failure to comply with this requirement will result in rejection of the submittal. Indicate dimensions, clearances, performance characteristics, capacities, wiring and piping diagrams, controls, and other information as required.
  - 3. Modify manufacturer's printed installation, erection, application and placing instructions to delete information that is not applicable to the Contract.
  - 4. Include appropriate information as required under the Contract Documents.
  - 5. Submit certificates of compliance not later than 30 days before products are installed. Have copy of certificate accompany the product for which the certificate is prepared. Include on the certificate:
    - i. Affirmation that the product complies with respective requirements indicated.
    - ii. Submittal date, the Contractor's name and address, Contract title and number, product represented and its location in the Contract, producer's name, product trade name and catalog number, place of product origin, test date, testing organization's name and address, and quantity of the product furnished.
    - iii. Signature of an officer or other authorized representative of the manufacturer or producer.
- h) Project schedules – Refer to General Conditions Section 5.3 for submittal requirements.

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- i) Traffic control plans in accordance with Section 2.3.
- j) List of Subcontractors and suppliers (including contact names, phone numbers and PWC registration number).
- k) Storm Water Pollution Prevention Program (SWPPP)/Los Angeles County NPDES (National Pollutant Discharge Elimination System) permit in accordance with Section 12.
- l) As-built drawings in accordance with General Conditions Section 2.8.
- m) Pre and post construction surveys in accordance with Sections 2.1 and 2.7.
- n) Closed circuit television (CCTV) inspection videos per Section 11.5.

The Contractor shall submit, resolve all comments, and obtain approvals from the appropriate City departments, Utility Owners, and all other applicable Governmental Persons. The Contractor shall provide Authority with a copy of all comments from Cities, Utility Owners, Governmental Persons, and all other third parties. The Contractor shall allow for a 45 day review period for all submittals and include this review time in its schedule.

### **1.3 FORMAT OF DOCUMENTS**

- a) The Contractor shall support the Authority's contract management software system. The Contractor shall submit, receive, and respond to Project documents, including submittals, Change Orders, Requests for Information (RFIs), cost proposals, correspondence, and other documentation in a standard electronic form using the Authority's web interface system. The Authority will provide the Contractor with one user license as well as instructions for accessing and submitting documents through the web interface.
- b) Throughout the Project, documents submitted by the Contractor shall be in PDF format in which the text is recognizable (OCR converted). Documents shall be direct-printed to PDF, such that the document is converted from the original program (e.g., Microsoft Office, Microstation), opposed to printing and scanning.
- c) The Contractor shall submit a submittal numbering system to the Authority for approval. To develop the submittal number, the Contractor shall reference the applicable Contract Document and section number.
- d) The Contractor shall submit the schedules in the methods and formats discussed in General Conditions Section 5.3.
- e) Upon request of the Authority, the Contractor shall submit electronic files in the original software format (DOC, XLS, DGN).
- f) The Contractor shall be responsible for ensuring all employees are familiar with the electronic submission requirements.
- g) Unless otherwise approved by the Authority, documents submitted after 12 pm on Thursday but before the subsequent Working Day will not include the Friday, Saturday,



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Sunday, or Authority observed Monday holidays before such Working Day in the calculation of days required for the Authority contractual replies.

### **1.4 CITY AND UTILITY OWNER PERMITS AND LICENSES**

- a) A City business license for each City where Work is performed will be required for the Contractor and Subcontractors. The Contractor and Subcontractors are responsible for obtaining business licenses at their own expense.
- b) The Contractor shall obtain any required permits from the applicable Utility Owner and applicable City. These permit fees may be waived per the applicable Master Cooperative Agreement.
- c) The Contractor shall comply with the MCAs and shall perform all tasks, obligations and duties assigned to Authority, its designee, agents, consultants and/or contractors; provided, however, that not all provisions may apply to the Contractor and so certain exclusions, such as work authorizations, may be appropriate as determined by the Authority. The MCAs reference the "Design/Build Contractor" but for purposes of the Project, the "Design/Build Contractor" shall mean the Contractor.
- d) If no Master Cooperative Agreement is applicable, the Contractor shall perform all Work related to a Utility in accordance with the applicable Utility Owner's requirements, and subject to the applicable Utility Owner's approval.
- e) City and Utility Owner contacts are provided below for the Contractor's reference purposes only and are subject to change. Notwithstanding the information provided in this Section 1.4(e), the Contractor shall be responsible for ensuring they have the latest contact information for each City, Utility Owner, and Governmental Person.

#### **City of Claremont**

Vince Ramos (909) 399-5395

#### **City of Glendora**

Alison Sweet (626) 914-8248

#### **City of La Verne**

Richard Martinez (909) 596-8741

#### **City of San Dimas**

Steven Barragan (909) 394-6247

#### **Golden State Water**

Kyle Snay (909) 592-4271, ext 1403

#### **Los Angeles County Sanitation Department**

Anthony Ulizio, Field Engineering Manager, (310) 830-8050

- f) The Contractor is responsible for obtaining a California Division of Occupational Safety and Health (Cal/OHSA) permit when required.

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### **1.5 SCRRRA PERMITS AND TRAINING**

Work will be performed within an active railroad right-of-way that is under the control of SCRRRA. Working around an active rail line is very hazardous and safety is of the utmost importance. SCRRRA has stringent rules which must be adhered to by the Contractor and will dictate when the Contractor can enter the rail corridor and work near the track. The Contractor shall obtain all necessary approvals and permits from SCRRRA before accessing the railroad right-of-way and work under the rules of SCRRRA. The Contractor is responsible for all SCRRRA fees required for Work, including work plan review, encroachment permit, safety training, and flagging. The Contractor shall not impact the operations of the railroad. ~~Refer to Reference Document 1 for SCRRRA requirements.~~

### **1.6 MEETINGS**

#### **a) Weekly Construction Management Meetings**

Weekly construction management meetings shall be held starting on a date and time mutually agreed to by the Authority and Contractor. The weekly construction management meeting shall be conducted by the Contractor's construction manager and attended by the appropriate members of the Contractor's staff, including required Subcontractors and the Authority. The agenda of the meeting shall include the following:

1. Construction submittal status and log.
2. Construction Request for Information (RFI) status and log.
3. Work completed during the previous period (refer to the three-week rolling bar chart schedule discussed below).
4. Work scheduled during the next three-week period (refer to the three-week rolling bar chart schedule discussed below).
5. Readiness review meeting schedule for upcoming Work.

Prior to the weekly construction management meeting, the Contractor shall prepare for presentation at the meeting a three-week rolling bar chart schedule. The three-week rolling bar chart schedule shall be based on the updated schedule of Work, and include activities that are planned in this 'window' of time, i.e., the previous week plus three weeks ahead. The three-week rolling schedule shall include activities that are recently completed, in-work, planned to start, and planned to complete. The bar chart schedule shall show at a minimum the activity ID as defined on the updated schedule of Work, description, early/actual starts and finishes, original and remaining duration and float sorted by the approved work breakdown structure (WBS).

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### **b) Readiness Review Meetings**

Upon the Authority's verification of the Contractor's readiness, the Contractor shall conduct readiness reviews. Readiness reviews shall be conducted prior to the start of specific Work activities to conduct prerequisite planning of activities, review required submittals and discuss specific Work to be accomplished. The Contractor shall commence the Work based on the results of the readiness review. Work may not proceed without the approval of the Contractor's quality manager, safety representative, Authority, and applicable Utility Owner and Governmental Persons. The Contractor shall schedule the readiness review meeting with the applicable third parties and notify the Authority a minimum of 48 business hours before the scheduled review, such that the Authority may attend.

### **1.7 STORAGE YARD**

The Authority will make available to the Contractor an approximate 24-ft wide by 300-ft long swath of property to use as a storage yard, in the general location depicted in Appendix 2. The Contractor shall:

- a) Maintain a minimum of 25-ft clearance from the centerline of the track at all times.
- b) Acquire right of access/entry from SCRRA.
- c) Acquire the consent of the City of La Verne as it is adjacent to the public roadway.

If additional space is required, it is the Contractor's responsibility to locate and pay for all costs in acquiring space for the storage and/or staging of construction materials, supplies, equipment, stockpiling of debris, or any other needs required for construction operations.

The Contractor shall install temporary construction fencing covered with a mesh screen to limit visibility to the storage and staging area(s).

Upon completion of the Project, property used for storage and/or staging shall be restored to its original condition with regard to appearance and maintenance and shall be graded and free of weeds and debris.

**\*\*\* END OF SECTION 1 \*\*\***

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### SECTION 2 – CONSTRUCTION CRITERIA

#### **2.1 CONSTRUCTION START-UP**

The Contractor shall not commence construction of any portion of the Project prior to occurrence of all the following events except with the prior written statement of no objection of Authority which may be granted or withheld in its sole discretion, and the Contractor shall commence such construction promptly following such events:

- a) The Contractor shall have submitted and received all required approvals from Authority, the applicable Utility Owner, and applicable Governmental Persons, including approval of (a) the maintenance of traffic plans in accordance with Section 2.3, (b) the material disposal plan in accordance with Section 2.10, (c) the storm water pollution prevention plan in accordance with Section 12, (d) a construction work plan in accordance with Section 1.2, (e) a dust control plan in accordance with Section 2.6, and (f) all applicable permits, including encroachment permits, described in Sections 1.4 and 1.5, for the individual Work elements.
- b) The Contractor, Authority, as well as any applicable Utility Owner and Governmental Persons shall have approved all applicable submittals relating to such portion of the Project.
- c) All required community notifications have occurred in accordance with General Conditions Section 3.22.
- d) All Governmental Approvals necessary for construction of the applicable portion of the Project shall have been obtained and all conditions of such Governmental Approvals, which are a prerequisite to commencement of such construction, shall have been performed.
- e) All required insurance and bonds shall remain in full force and effect.
- f) All necessary rights of access for such portion of the Project shall have been obtained, including right of entry from SCRRA and temporary construction easements to private property, if required.
- g) The Contractor shall have completed all required investigations to establish and confirm the existence and location of Utilities in such portion of the Project.
- h) The Contractor shall have completed a pre-construction survey in accordance with Section 2.4.
- i) The Contractor shall have completed a pre-construction CCTV of sewer lines which may be impacted by the Work per Section 11.5.
- j) All maintenance of traffic and access to property requirements, including maintenance of traffic plans (MOT), and public notices are in place and in conformity with the Contract Documents.

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- k) All quality control personnel and equipment necessary for the Work to be constructed are on Site.
- l) A readiness review shall have been conducted in accordance with Section 1.6(b).

### **2.2 TEMPORARY FACILITIES AND UTILITY SERVICES**

The Contractor shall design, install, operate, maintain, remove and bear all costs for temporary facilities needed for the construction, installation and testing of the Project including:

- a) Temporary water and electric power including payment of all meter installation/s and all water and power used.
- b) Temporary construction easements.
- c) Temporary fire protection as required by the local and National Fire Protection Association (NFPA) fire regulations.
- d) Temporary sanitation services.

### **2.3 MAINTENANCE OF TRAFFIC DURING PERFORMANCE OF THE WORK**

These criteria set forth basic principles and prescribe standards for the design, application and maintenance of the various types of traffic control devices required for street construction and maintenance operations Work. These principles and standards are intended to ensure the safe and expeditious movement of traffic through construction and maintenance zones and the safety of the work force performing these operations. Minimum standards of application are prescribed for typical situations and for controlling traffic through Work areas, including traffic devices, markings, barricades, and channeling devices.

The Contractor shall conduct its Work with the least possible obstruction of traffic. The convenience of the public and of the residents adjacent to the Project, and the protection of persons and property, are of primary importance and shall be provided for by the Contractor in an adequate and satisfactory manner.

The Contractor shall submit traffic control plans to the Authority as well as the applicable City(ies) and Governmental Persons for approval, and shall comply with all applicable Governmental Rules and Governmental Approvals. At a minimum, traffic control plans shall:

- a) Provide for safety of motorists, pedestrians, and workers in the vicinity of the construction and maintenance areas.
- b) Include the construction and maintenance of adequate temporary crossings where necessary to provide access to adjacent property.
- c) Keep fire hydrants accessible.
- d) Minimize construction time to reduce exposure to potential hazards.

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- e) Guide motorists and pedestrians in a clear and positive manner while approaching and traversing construction and maintenance areas, using adequate warning, delineation and channeling by means of proper pavement markings, signing, and use of other devices that are effective under varying conditions of light and weather. The Contractor shall maintain such temporary markings and signage to all applicable Governmental Rules. Use of flaggers shall be employed when required to control traffic or when all other methods of traffic control are inadequate to warn and direct drivers.

### **2.4 PRE/POST CONSTRUCTION SURVEYS**

The Contractor shall perform pre and post construction surveys of the adjacent properties, Utilities, streets, and all other structures and facilities that may be impacted by the Work. As part of the pre-construction survey, the Contractor shall produce a detailed continuous high-definition digital video, high resolution photographs, and other means necessary to accurately determine the existing conditions. If existing damage is identified, such damage and corresponding area shall be documented in detail prior to the Work starting. The Contractor shall submit the pre-construction surveys to the Authority and applicable Utility Owner and Governmental Persons, for review and approval prior to the start of construction at each Utility.

The post-construction survey shall be performed in the same manner as the pre-construction survey and shall be performed in such a way as to document any changes or damages which have occurred during construction. The Contractor shall submit the post-construction surveys to the Authority and applicable Utility Owner and Governmental Persons, within 30 days of completion of the Work at each Utility.

### **2.5 NOT USED**

### **2.6 CONSTRUCTION MITIGATION MEASURES, MONITORING AND REPORTING PLAN**

The Contractor shall perform construction operations in a manner to minimize impacts to the environment, including air quality, biological, traffic, noise, vibration, and water quality; and in accordance with codes and requirements of the applicable Governmental Persons. The Contractor shall be responsible for the preparation, submission, acquiring approval, and implementation of a dust control plan and storm water pollution prevention plan (SWPPP) for the Work. The Contractor shall be responsible for performance, compliance, monitoring and reporting of the “during construction” environmental impact mitigation measures identified in Appendix 1.

The Contractor shall provide to the Authority six-month updates of the status of all “during construction” environmental impact mitigation measures and a final report documenting compliance with all applicable environmental impact mitigation measures.

The Contractor shall promptly inform the Authority of any complaints received from the public regarding any of the environmental impact mitigation measures. In the event of any complaint, the Contractor shall monitor the impact levels of the Work operations to ensure compliance with the applicable Governmental Rules and retain records of the measurements

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for inspection by the Authority. If the Work operations exceed the MMRP or applicable jurisdictional Governmental Persons' limitation, the Contractor shall describe the action proposed and the schedule for implementation, and subsequently inform the Authority of the results of the action.

### **2.7 RESTORATION OF EXISTING FACILITIES**

- a) All roads and streets in which the surface is removed, broken or damaged, or in which the ground has caved or settled due to work under the Contract, shall be completely resurfaced and brought to the original grade and crown section unless otherwise indicated in the Contract Drawings. Before resurfacing material is placed, edges of pavements shall be trimmed back far enough to provide clean, solid, vertical faces, and shall be free of any loose material. Paving shall be one-inch thicker than adjoining pavement and shall conform to the requirements of the Specifications. Roadways used by the Contractor for hauling materials, equipment, supplies, and otherwise, shall be cleaned and repaired if the condition of the roadway is damaged or otherwise affected due to the Contractor's operation.
- b) All cultivated areas, either agricultural or landscaping, and other surface improvements which are damaged by actions of the Contractor shall be restored to their original condition.
- c) All section, section subdivisions, plat, U.S.E.D., U.S.C. & G.S., U.S.G.S., and any other official monuments or bench marks shall be carefully preserved or replaced. In the event any such monument or marker is disturbed as a result of the Contractor's operation, the Contractor shall replace or reset such monument or marker in a manner satisfactory to the Engineer. Replaced or reset monuments shall be of acceptable type and quality and shall be located so as to clear existing utilities or any other interference. They shall be placed in a manner consistent with good and recognized engineering and surveying practice.
- d) All fences, structures, and facilities removed shall be reconstructed as promptly as is reasonably possible in their original or other authorized locations and in a condition at least as good as when removed and subject to the inspection of the applicable City, or the governing body having jurisdiction.
- e) The Contractor shall have completed a post-construction survey in accordance with Section 2.4.
- f) The Contractor shall have completed a post-construction CCTV of sewer lines per Section 11.5.

### **2.8 NOT USED**

### **2.9 COMPACTION TESTING**

All soils testing shall be done by a testing laboratory approved by the Authority and in accordance with the Contract Documents at the Contractor's expense. Compaction tests shall occur at two different locations for each sewer and waterline and shall occur at maximum two-foot vertical lift intervals or as otherwise required by the applicable Utility Owner or

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Governmental Persons. For example, a nine-foot depth of backfill will require five compaction tests at two different locations.

In the case that the tests of the fill or backfill show non-compliance with the required density, the Contractor shall accomplish such remedy as may be required to ensure compliance. Such remedy and subsequent testing to show compliance shall be at the Contractor's expense.

### **2.10 REMOVAL, TREATMENT AND DISPOSAL OF MATERIALS**

The Contractor shall prepare and maintain a "Material Disposal Plan" for the responsible identification, removal, treatment and disposal of all excavated materials including paving material, common excavation, rock excavation, debris, removed Utility materials, and other materials encountered during the construction, including any Hazardous Substances. The removal, treatment and disposal of all such materials shall conform to all applicable Governmental Rules.

The Authority has not identified material within the Site that would be defined as a Hazardous Substance under the Federal Resource Conservation and Recovery Act (RCRA) of 1976, 42 U.S.C. Section 6901 et seq. In the event that Hazardous Substances are encountered during performance of the Work, the Contractor shall notify the Authority immediately and the Authority will determine the appropriate next steps. Any Work related to the removal and disposal of Hazardous Substances shall be paid for through a Change Order, as determined by the Authority.

The Contractor shall track the actual disposition of all disposed material, recording the time of the disposal, nature of the materials and the location of the disposal.

The Contractor shall be responsible for environmental operations and contaminated soils created by the Contractor's activities.

**\*\*\* END OF SECTION 2 \*\*\***



## **SPECIAL PROVISIONS**

### **SECTION 3 - EARTHWORK AND GRADING**

#### **3.1 GENERAL**

The Contractor shall furnish all labor, materials, tools, equipment, transportation, watering, compacting and all incidental Work and services required for satisfactory completion of earthwork and grading required for the Project. Earthwork and grading shall conform to Section 300 of the Standard Specifications except as modified herein.

#### **3.2 PRESERVATION OF PROPERTY**

Existing improvements or facilities and trees and shrubs that are not to be removed, shall be protected from injury or damage resulting from operations of the Contractor, and the Contractor shall be responsible for such damage. Only trees and shrubs specifically designated or marked by the Contractor for removal, and approved by the Authority, shall be removed.

The Contractor shall provide such dust control equipment and methods as may be required to protect adjacent property from annoyance or damage from dust caused by its operations. Failure to control such dust shall be cause for the Authority to stop the Work until said dust is controlled, and the Contractor shall have no recourse to collect from the Authority for any loss of time or expense sustained by him due to such suspension of Work.

#### **3.3 CLEARING AND GRUBBING**

Except as otherwise specified, all trees, stumps, large roots, buried logs, decayed vegetable matter, buried junk piles, heavy growth of grass and weeds and all other objectionable material shall be removed from the site of the Work. None of the above materials shall be permitted to remain in or under embankment and fill areas.

Material removed during clearing and grubbing, including any excess excavation, shall be removed from the site of the Work and disposed offsite by the Contractor, at the expense of the Contractor. Burning of materials on the site is not permitted.

#### **3.4 WATERING**

All water used for compacting original ground, embankments, structure and trench backfill, subgrade, base and for laying dust caused by grading or traffic shall be included in the price bid for such items and separate payment will not be allowed for watering.

#### **3.5 PAYMENT**

The payment for earthwork and grading is included in the Contract Price.

**\*\*\* END OF SECTION 3 \*\*\***

## **SPECIAL PROVISIONS**

### **SECTION 4 - AGGREGATE BASE**

#### **4.1 GENERAL**

The Contractor shall furnish all plant, labor, materials, tools, equipment, transportation and all incidental Work and services required to construct aggregate base in accordance with the Contract Documents and Section 200 and 301 of the Standard Specifications, as modified herein.

#### **4.2 SUBGRADE**

The subgrade shall be prepared as specified in Section 301-1 of the Standard Specifications.

#### **4.3 UNTREATED BASE MATERIALS**

The aggregate for untreated base shall conform to the requirements of Section 200-2 of the Standard Specifications.

#### **4.4 PLACING UNTREATED BASE**

Untreated base material shall be spread on the prepared subgrade in uniform layers in accordance with Section 301-2 of the Standard Specifications.

#### **4.5 COMPACTING UNTREATED BASE**

Untreated base shall be compacted in accordance with Section 301-2.3 of the Standard Specifications. The finished base, where not controlled by adjacent structures, shall be not more than 0.02 foot above, and not more than 0.02 foot below the theoretical cross-section.

#### **4.6 PAYMENT**

The payment for aggregate base is included in the Contract Price.

**\*\*\* END OF SECTION 4 \*\*\***

## SPECIAL PROVISIONS

### SECTION 5 - CAST-IN-PLACE CONCRETE

#### 5.1 GENERAL

The Contractor shall furnish all plant, labor, materials, tools, equipment transportation and all incidental Work and services required to construct thrust blocks, sewer encasements, cast-in-place sewer manhole base, and slurry backfill shown on the Contract Drawings or specified, in accordance with the Specifications and Sections 201, 217, and 303 of the Standard Specifications except as modified herein.

#### 5.2 SUBMITTALS

The following items shall be submitted to the Authority for review and approval:  
Concrete mix design.

- a) Shop Drawings for reinforcing steel in conformance with ACI 318. Provide bending diagrams and assembly diagrams. Indicate splicing, laps of bars, shapes, dimensions, and details of bar reinforcing, accessories, and concrete cover. Do not scale dimensions from Contract Drawings to determine lengths of reinforcing steel. Reproductions of Contract Drawings are unacceptable.
- b) Delivery tickets from plant for each load of concrete placed. Each ticket shall state quantities by weight of each component of the load (cement, sand, water, and the like).
- c) Certificate of compliance signed by the supplier of fly ash identifying the type of fly ash and certifying that fly ash complies with ASTM C618.
- d) Certification that aggregates meet the requirements of ASTM C33 Appendix XI for reactivity when tested in conformance with ASTM C289.
- e) Certification that the aggregates meet the soundness requirements of ASTM C33 when tested in conformance with the requirements of ASTM C88 using a sodium sulfate solution.
- f) Concrete strength test method prior to placing concrete.
- g) Concrete strength test results prior to backfilling.

#### 5.3 SUBGRADE

Subgrade shall be prepared in accordance with Section 303-1.2 of the Standard Specifications. The completed subgrade shall be tested for grade and cross-section by means of a template extending the full depth of the section and supported between the side forms.

#### 5.4 MATERIAL

- a) All concrete encasements shall be constructed with *Class 660-CW-4000P* concrete.
- b) All concrete thrust blocks shall be constructed with the class shown on the Contract Drawings.

## **SPECIAL PROVISIONS**

- c) All concrete shall be in accordance with Section 201 of the Standard Specifications.
- d) For concrete encasements, reinforcing bars shall be Grade 60 in accordance with ASTM A706, Standard Specifications Section 201-2 and ACI 318.
- e) Slurry backfill shall be 100-E-100 in accordance with Standard Specifications Table 201-1.2.

### **5.5 MIXING, PLACING AND CURING**

- a) The mixing, placing and curing of concrete shall comply with Section 303 of the Standard Specifications.
- b) Where concrete is placed against concrete older than 60 days, clean and roughen existing concrete ¼ inch amplitude by sandblasting and exposing the aggregate.

### **5.6 FORMS**

- a) All forms shall be set to the true lines and grades as shown on the plans and typical cross-sections. The depth of forms shall be equal to the full depth of the structure. Construct formwork in accordance with Standard Specifications Section 303-1.3. Construct forms that can be removed without hammering or prying against concrete.
- b) Remove forms in accordance with Section 303-1.4 of the Standard Specifications.

### **5.7 FINISHING**

Finish concrete in accordance with Section 303-1.9 of the Standard Specifications.

### **5.8 CURING**

Exposed concrete surfaces shall be cured in accordance with Section 303-1.10 of the Standard Specifications.

### **5.9 REINFORCEMENT PLACING**

Place reinforcing bars in accordance with Section 303-1.7 of the Standard Specifications.

### **5.10 TRENCH EXCAVATION AND BACKFILL**

- a) Trench excavation and backfill shall be in accordance with the Contract Drawings and Sections 306-3 and 217 of the Standard Specifications.
- b) Extra precaution shall be taken when excavating near existing Utilities. No mechanical equipment is permitted to excavate within two feet of existing Utilities.
- c) The density of backfill soil shall be determined in place by the sand cone method, ASTM D 1556, or by nuclear method, ASTM D 2922 or D 3017.

## **SPECIAL PROVISIONS**

### **5.11 PAYMENT**

The payment for cast-in-place concrete is included in the Contract Price.

**\*\*\* END OF SECTION 5 \*\*\***

## SPECIAL PROVISIONS

### SECTION 6 - ASPHALT CONCRETE PAVEMENT

#### **6.1 GENERAL**

The Contractor shall furnish all plant, labor, materials, tools, equipment, transportation and all incidental Work and services required to construct asphalt concrete pavement and asphalt concrete resurfacing in accordance with the Specifications, applicable Contract Drawings and Section 203 and Section 302 of the Standard Specifications, except as modified herein.

#### **6.2 PRIME AND SEAL COATS**

Prime and seal coats shall conform to Section 203 of the Standard Specifications

#### **6.3 ASPHALT BINDER**

A tack coat shall be applied to all concrete curb or gutter surfaces that will be in contact with the asphalt surfacing.

When the surface to be paved is an existing portland cement, brick, or dry asphalt pavement, a tack coat shall be applied to said surface at the rate of 0.10 gallon per square yard of surface covered or as otherwise approved by the applicable City. The tack coat shall be applied only so far in advance of paving or surfacing as may be required by the applicable City.

The surface to be covered shall be thoroughly cleaned of all dirt and loose materials prior to application of the asphalt binder.

The tack coat shall consist of an emulsified asphalt, *PG 64-10* paving asphalt. It shall be furnished and applied in accordance with the requirements of Section 203-3 and 302-5 of the Standard Specifications.

#### **6.4 ASPHALT CONCRETE**

Asphalt concrete shall be the product of mixing mineral and/or crushed slag aggregate with asphalt binder at a central mixing plant.

The combined mineral aggregate shall be as follows:

<b>Pavement Thickness</b>	<b>Maximum Size</b>	<b>Aggregate Class</b>
Match existing	½-inch	D-1

The asphalt binder shall be paving asphalt. The viscosity grade shall be as specified by the applicable City and shall conform to the requirements of Section 203.6 of the Standard Specifications. The temperature of the paving asphalt and the mineral aggregate at the time of mixing shall conform to Section 203-1 of the Standard Specifications.

#### **6.5 PLACING ASPHALT CONCRETE PAVEMENT**

Prime coat or plant mixed surfacing shall be placed on the base course or subgrade only after said base has been approved by the applicable City. All Work shall conform to Section 302-5 of the Standard Specifications except as modified herein.

## **SPECIAL PROVISIONS**

The application temperature of asphalt shall conform to Section 203-1.4 of the Standard Specifications. Distribution and spreading shall conform to Section 302-5.4 of the Standard Specifications.

The Contractor shall furnish to the Authority certified weight tickets for all asphalt concrete incorporated in the Work.

### **6.6 COMPACTION**

Asphalt concrete shall be thoroughly compacted in accordance with Section 302-5 and Section 302-5.6.1 of the Standard Specifications. All valve cans and lids shall be adjusted to pavement grade prior to rolling.

Manholes and other structures shall be adjusted to grade per Section 302-5.7 of the Standard Specifications.

### **6.7 PAYMENT**

The payment for asphalt concrete is included in the Contract Price.

**\*\*\* END OF SECTION 6 \*\*\***

## **SPECIAL PROVISIONS**

### **SECTION 7 - WATER DISTRIBUTION PIPELINES**

#### **7.1 GENERAL**

The Contractor shall furnish and install all fittings, valves, supports, bolts, nuts, gaskets, jointing, materials and appurtenances as shown on the Contract Drawings and as specified herein, and shall furnish and install all auxiliary piping and connection to equipment, all as required for a complete and workable piping system.

#### **7.2 SUBMITTALS**

The Contractor shall submit to the Authority manufacture's data on materials, construction, connections, and ratings.

#### **7.3 BUTTERFLY VALVES AND FLANGES**

- a) Butterfly valves shall be short body, flanged type conforming to AWWA C504, Class 150B. The minimum working differential pressure across the valve disc shall be 150 psi. Valve ends shall be Class 125, ANSI B16.1. Valve shafts shall be Type 304 or 316 Stainless Steel, or carbon steel with Type 304 or 316 stainless steel journals and static seals. Valve bodies shall be tested at pressure equal to twice the design working pressure. Bodies of all valves shall be of cast iron or ductile iron. Valve discs shall be an integral part of the valve body or disc.
- b) The rubber seat for butterfly valves shall be an integral part of the valve body or disc.
- c) Valves shall be Pratt, Dezurik, Mueller, or Kennedy AWWA butterfly valve or approved equal.
- d) Flanges shall be cast iron or ductile iron faced and drilled to ANSI B16.1 125lb class or ANSI B16.5 150lb class.
- e) Flanged gaskets shall conform to Section 212-2.7 of the Standard Specifications
- f) Field welding of steel pipe shall conform to Section 209-2.2.6 of the Standard Specifications.

#### **7.4 TRENCH EXCAVATION AND BACKFILL**

- a) Trench excavation and backfill shall be in accordance with the Contract Drawings and Sections 306-3 and 217 of the Standard Specifications.
- b) Extra precaution shall be taken when excavating near existing Utilities. No mechanical equipment is permitted to excavate within two feet of existing Utilities.
- c) The density of backfill soil shall be determined in place by the sand cone method, ASTM D 1556, or by nuclear method, ASTM D 2922 or D 3017.



## **SPECIAL PROVISIONS**

### **7.5 EXECUTION OF INSTALLATION**

- a) All valves shall be installed and supported in their respective positions, free from all distortion and strains. The Contractor shall prevent damage or injury to all valves or appurtenances during handling and installation.
- b) All valves shall be installed as noted in the Contract Drawings and in accordance with the manufactures' recommendations.
- c) The Contractor shall inspect all material for defects in workmanship and materials. The Contractor shall clean all debris and foreign materials out of valves, and check all operating mechanisms operated for their proper functioning, and all nuts and bolts for tightness. Valves that do not operate properly or are otherwise defective shall be replaced at the Contractor's expense.

### **7.6 TESTING VALVES**

The Contractor shall provide the Authority with testing records for all valves installed. The records shall include valve identification number, size, manufacturer, model, number of turns to open/close.

### **7.7 PRESSURE TESTING**

Prior to bacteriological sampling and flushing, the Contractor shall pressure test the line under the inspection of the Authority and applicable Utility Owner or applicable Governmental Person. The pipeline shall be filled with water and must withstand a test pressure equal to 200 psi for 4 hours.

During the first 2 hours, leakage shall not exceed the quantities shown in Table I. No pressure drops shall be permitted during the second two-hour period. Any leaks developed or discovered under this test shall be repaired immediately, and the line shall be retested until it successfully maintains the test pressure for 4 hours without exceeding the allowable leakage values in Table I. Water required to fill the segment of new main for hydrostatic pressure testing shall be supplied through a temporary connection between the applicable Utility Owners' or applicable Governmental Persons' distribution system and the pipe segment being tested. The temporary connection shall include a backflow prevention device and shall be disconnected (physically separated) from the new main during the hydrostatic pressure test. The Contractor shall pressure test against a newly installed closed gate valve.

Any chlorinated water resulting from leaks must be dechlorinated to non-detectable levels before reaching catchment basins, storm drains, or natural waterways. The Contractor is responsible for compliance with state and local waste discharge requirements and Best Management Practices (BMPs) in accordance with the approved SWPPP.

If any pipe, special fittings, valves or appurtenances fail during the test or after installation, the Contractor shall remove and replace all failed materials with appropriate new material, and correct any damages to surrounding facilities. The cost of any necessary repair shall be the Contractor's sole cost.

## **SPECIAL PROVISIONS**

**TABLE I**

Table of Allowable Leakage		
Gallons per 1000 feet per hour Pressure Test		
Pipe Material	Pipe Diameter	Test Pressure 200 psi
DI, CI, Steel	6"	2.55
	8"	3.40
	12"	5.10
	16"	6.80

Where variations in pipe pressure classification, size, or pressure/elevation occur, use prorated averages.

### **7.8 DISINFECTION**

The Contractor shall submit a written "Disinfection Plan" to the Authority for approval prior to disinfecting the water main. The Disinfection Plan shall show the proposed location of the sampling points for approval.

### **7.9 PAYMENT**

The payment for water pipeline items is included in the Contract Price.

**\*\*\* END OF SECTION 7 \*\***

## **SPECIAL PROVISIONS**

### **SECTION 8 - MISCELLANEOUS METALWORK**

#### **8.1 GENERAL**

The Contractor shall furnish, fabricate, and install all miscellaneous metalwork required by the Specifications and the Contract Drawings. Miscellaneous metalwork, as used herein, is defined as all items required to be fabricated from structural steel shaped, plates, bars and their products. Except for miscellaneous metalwork items manufactured of stainless steel, all structural steel shapes, plates, bars and their products shall conform to the "Specifications for Structural Steel" (ASTM A36) or the "Specifications for Low and Intermediate Tensile Strength Carbon Steel Plates of Structural Quality" (ASTM A283), (Grade B or C). All miscellaneous items shall be galvanized after fabrication. The Contractor shall furnish Shop Drawings of all miscellaneous metalwork. Fabrication shall not commence prior to approval by the Authority of the Shop Drawings.

#### **8.2 BOLTS**

The Contractor shall furnish and set all bolts and anchor bolts. All bolts shall be low-carbon steel, galvanized after fabrication or they shall be stainless steel. Steel for bolts shall meet the requirements of the "Specifications for Carbon Steel Externally and Internally Threaded Standard Fasteners", Grade B (ASTM A307). Steel for anchor bolts shall meet the requirements of "Specifications for Steel Structural Rivets", (ASTM A502) with the following exceptions and additions: (1) the nut material shall be free cutting steel and (2) the nuts shall be capable of developing the full strength of the anchor bolts. Threads shall be Coarse Thread Series conforming to the requirements of the American Standard for Screw Threads. All bolts shall have the hexagon heads and nuts shall be Heavy Hexagon Series.

#### **8.3 GALVANIZING**

All structural steel plates, shapes, bars and fabricated assemblies required to be galvanized shall, after the steel has been thoroughly cleaned of rust and scale, be galvanized in accordance with the "Specifications for Zinc (Hot-Galvanized) Coatings on Products Fabricated from Rolled, Pressed and Forged Steel Shapes, plates, Bar and Strips" (ASTM A123). Any galvanized part that becomes warped during the galvanizing operation shall be straightened. Bolts, anchor bolts, and similar threaded fasteners, after being properly cleaned shall be galvanized in accordance with the "Specifications for Zinc Coating (Hot Dip) on Iron and Steel Hardware" (ASTM A153).

#### **8.4 PAYMENT**

The payment for miscellaneous metalwork is included in the Contract Price.

**\*\*\* END OF SECTION 8 \*\*\***

## SPECIAL PROVISIONS

### SECTION 9 - PAINTING AND PROTECTIVE COATINGS

#### 9.1 GENERAL

- a) The Contractor shall furnish all labor, material and equipment necessary to complete the painting and protective coatings as required by the Contract Documents. Equipment shall include brushes, spray guns, drop cloths, scraping and sanding equipment, masking material, ladders and any scaffolding that may be required.
- b) Spray painting shall be conducted under controlled conditions and the Contractor shall be fully responsible for any damage occurring from spray painting.
- c) Painting and protective coatings shall be applied in accordance with the manufacturer's specifications. Each coat of paint shall be of the proper consistency and shall be well brushed, rolled or sprayed to obtain a uniform and evenly applied finish. Work shall be free from "runs", "bridges", "shiners" or other imperfections.
- d) Only good clean brushes and equipment shall be used.

#### 9.2 FERROUS SURFACES NOT BURIED

- a) **Surface Preparation:** Deposits of dirt, grease, tar and oil shall be removed and all sharp edges and weld splatter shall be ground smooth. The surface to be painted shall be prepared in accordance with SSPC-SP-3 (Power Tool Cleaning) or SSPC-SP-2 (Hand Tool Cleaning), as applicable, to remove all rust, mill scale, paint or other foreign matter. All dust shall be removed from the surface by brush or industrial vacuum.

Galvanized metal surfaces shall be cleaned of all foreign matter and treated with an Engard barrier primer or approved equal then coated in accordance with this section.

- b) **Prime Coating:** The prime coating shall be applied immediately after the surface has been prepared. The surface shall receive one coat of Kop-Coat 340 (2 mils) or approved equal.
- c) **Finish Coating:** The primed surface shall receive two finish coats of Kop-Coat 200 (5 mils each) or approved equal. The color of the finish coat shall be selected by the applicable Utility Owner.

#### 9.3 BURIED MISCELLANEOUS FERROUS SURFACES

Buried valves and flanged joints, sleeve-type and victaulic couplings and other buried miscellaneous ferrous piping and metal surfaces (excluding any cast iron pipe) shall be thoroughly cleaned and field-coated with two 10 mil coatings of 300-M as manufactured by Kop-Coat, or approved equal. The coating shall be applied in strict accordance with the manufacturer's recommendations.

#### 9.4 PAYMENT

The payment for painting and protective coatings is included in the Contract Price.

## **SPECIAL PROVISIONS**

**\*\*\* END OF SECTION 9 \*\***

## **SPECIAL PROVISIONS**

### **SECTION 10 – STEEL CASINGS**

#### **10.1 GENERAL**

This section describes installing split steel casings around existing and proposed water lines by open trench. The Contractor shall furnish all plant, labor, materials, tools, equipment, transportation and all incidental Work and services required to install such split steel casings in accordance with the Contract Documents.

#### **10.2 SUBMITTALS**

- a) Manufacture's mill specification sheet listing diameter, thickness, and class of steel used in making the casing, and mill certification shall be submitted to the Authority and applicable Utility Owner for approval.
- b) Detailed casing spacer dimensions, spacings, and materials.

#### **10.3 MATERIALS**

##### a) Steel Casing

- 1. Steel Casing: Steel casing shall have a yield strength of at least 3500 PSI and shall comply with SCRRA's Engineering Standard ES5001. The minimum inside diameter and wall thickness of the casing shall be as shown on the Contract Drawings.
- 2. Joints: Casing sections shall be joined by a flanged or welded connection per the Contract Drawings.
- 3. Wall thickness: The minimum size and thickness of casing pipes for insertion of various sizes of carrier pipes shall be in accordance to SCRRA's Engineering Standard Drawing ES500.
- 4. Flanges: Flanges shall be a minimum thickness of 3/8" and have a yield strength of at least 3500 PSI.

##### b) Casing End Seals

Casing end seals shall be 1/8-inch thickness and be synthetic rubber, designed to fit snugly around pipe and casing. Casing seals shall be one piece with no field seams or the wrap-around style. Bands and hardware for attachment to pipe and casing shall be stainless steel.

##### c) Pipe Spacers

Pipe skids and blocking: Skids and blocking shall be manufactured stainless steel casing spacers with composite runner skids. Casing spacer skids and blocking shall be bolt-on style with a shell made of at least two halves. The band material shall be manufactured of a minimum 14-gauge T-304 stainless steel and 10-gauge T-304 stainless steel risers when needed. All welds are to be chemically passivated. The runners shall be at least 11

## **SPECIAL PROVISIONS**

inches long and shall be manufactured of high abrasion resistant and low coefficient of friction, glass-filled polymer. Fasteners and hardware for securing the spacers and runners shall be stainless steel. Spacers shall be installed at mid-sections if the carrier pipe segment is over 10 feet long. Detailed product submittals showing all dimensions shall be provided to the Authority and the applicable Utility Owner. Casing spacers shall have a flexible EPDM liner having a minimum thickness of 0.090 inch with a hardness of Durometer "A" 85-90. The liner shall have a rating of no less than 60,000 VPM and water absorption of 1% maximum.

Casing spacers shall be as manufactured by Advance Products & Systems, Inc., Cascade Waterworks Mfg. Co., Pipeline Seal & Insulator, Inc. or approved equal.

### **10.4 TRENCH EXCAVATION AND BACKFILL**

- a) Trench excavation and backfill shall be in accordance with the Contract Drawings and Sections 306-3 and 217 of the Standard Specifications.
- b) Extra precaution shall be taken when excavating near existing Utilities. No mechanical equipment is permitted to excavate within two feet of existing Utilities.
- c) The density of backfill soil shall be determined in place by the sand cone method, ASTM D 1556, or by nuclear method, ASTM D 2922 or D 3017.

### **10.5 PAYMENT**

The payment for steel casings is included in the Contract Price.

**\*\*\* END OF SECTION 10 \*\*\***

## **SPECIAL PROVISIONS**

### **SECTION 11 – SANITARY SEWER FACILITIES**

#### **11.1 GENERAL**

The Contractor shall furnish all plant, labor, materials, tools, equipment, transportation and all incidental Work and services required to construct sewer pipe, abandonment of existing manhole, precast manholes, and manhole frame and covers in accordance with the Contract Documents and Sections 201, 206, 207, 208, 217, 303, and 306 of the Standard Specifications.

See Section 5 for concrete encasements for sewers.

#### **11.2 SUBMITTALS**

Product data including concrete mix design, manhole frame and cover castings, plaster liner, mastic seam material, and Vitrified Clay Pipe (VCP).

#### **11.3 MATERIALS**

- a) VCP shall conform to Section 207-8 and 306 of the Standard Specifications.
- b) Precast manhole shall conform to Section 201 and 207 of the Standard Specifications and the Contract Drawings.
- c) Manhole frame and cover shall comply to Section 206 of the Standard Specifications and the Contract Drawings.

#### **11.4 TRENCH EXCAVATION AND BACKFILL**

- a) Trench excavation and backfill shall be in accordance with the Contract Drawings and Sections 306-3 and 217 of the Standard Specifications.
- b) Extra precaution shall be taken when excavating near existing Utilities. No mechanical equipment is permitted to excavate within two feet of existing Utilities.
- c) The density of backfill soil shall be determined in place by the sand cone method, ASTM D 1556, or by nuclear method, ASTM D 2922 or D 3017.

#### **11.5 CLOSED CIRCUIT TELEVISION INSPECTION**

The Contractor shall provide closed circuit television (CCTV) inspection of sewer facilities pre and post construction in accordance with the Standard Specifications. At least 7 days prior to beginning CCTV inspection work, the Contractor shall schedule a meeting with the Authority, applicable Utility Owner, and applicable Governmental Persons to review inspection methods and traffic control plans. The Contractor shall provide a pre-construction CCTV video on a DVD to the Authority prior to commencement of the Work on each sewer facility and shall provide a post-construction CCTV video within 30 days after completion of the Work at each sewer facility. Picture quality and definition shall be to the satisfaction of the Authority.



## **SPECIAL PROVISIONS**

### **11.6 PAYMENT**

The payment for sanitary sewer systems is included in the Contract Price.

**\*\*\* END OF SECTION 11 \*\*\***

## **SPECIAL PROVISIONS**

### **SECTION 12 - STORM WATER BEST MANAGEMENT PRACTICES**

#### **12.1 GENERAL**

This section provides the requirements for storm water pollution control during construction, including preparation and implementation of a site-specific Storm Water Pollution Prevention Plan (SWPPP) and installation, inspection, removal, and documentation of Best Management Practice (BMP) measures.

- a) Implementation of Storm Water Pollution Prevention Plan (SWPPP) measures shall be the first order of business upon site mobilization.
- b) Authority will not be responsible for the Contractor's failure to accept all or any portion of an originally submitted or revised SWPPP program, nor for any delays to the Work due to the Contractor's failure to submit an acceptable SWPPP. Such failures or delays are not a basis for an increase in Contract time or Contract Price.
- c) Two copies of the SWPPP, inspection records, reports, and sampling records, together with updates, revisions and amendments shall be kept at the construction site.
- d) Provide updates to submittal items monthly or as directed by Authority per the requirements of this section, and provide documents for Authority to upload to SMARTS.
- e) Design and incorporate BMPs into the Project design in a manner that ensures that Project facilities comply with the requirements of the respective permits.

#### **12.2 REFERENCES**

The Work under this Section 12 shall comply with the following standards:

- a) Standard Specifications.
- b) State of California, Department of Transportation (Caltrans), "Storm Water Pollution Prevention Plan and Water Pollution Control Program Preparation Manual" and the "Construction Site Best Management Practices Manual". Copies of these documents may be obtained from the Department of Transportation, Material Operations Branch, Publication Distribution Unit, 1900 Royal Oaks Drive, Sacramento, California 95815, Telephone: (916) 445-3520 or electronically from the Caltrans website.
- c) California Storm Water Quality Association (CASQA) "Storm Water Best Management Practice Handbook Portal: Construction," including Appendix B, the "Storm Water Pollution Prevention Plan Outline" and Appendix D, "Field Monitoring and Analysis Guidance". Copies of these documents and the National Pollutant Discharge Elimination System (NPDES) permits may be obtained by accessing the CASQA website or by contacting the Los Angeles County Department of Public Works – Cashier, 900 South Fremont Avenue, Alhambra, CA 91803 (626) 458-6959.
- d) State Water Resources Control Board (SWRCB) Order No. R2-2009-0009-DWQ,

## **SPECIAL PROVISIONS**

NPDES General Permit No. CAS000002, Storm Water Discharges Associated with Construction and Land Disturbance Activities, September 2, 2009 as amended by 2010-0014-DWQ and 2012-0006-DWQ (hereafter Construction General Permit or CGP).

### **12.3 STORMWATER POLLUTION PREVENTION SUBMITTALS**

- a) Within seven days after the Authority awards the Contract, the Contractor shall submit the proposed Storm Water Pollution Prevention Plan (SWPPP) to the Authority. The Authority shall review the SWPPP within 14 days of receipt of the plan. If revisions are required, the Contractor shall revise and re-submit the document within seven days of their receipt of the Authority's comments. The Authority shall then have seven days to consider the revisions made by the Contractor and approve the SWPPP.
- b) The Contractor shall maintain a minimum of two readily accessible copies of the SWPPP at the Project site. The SWPPP shall be made available upon request of a representative of the Los Angeles Regional Water Quality Control Board (LARWQCB) or the U.S. Environmental Protection Agency (U.S. EPA). Requests by environmental groups and the public shall be directed to the Authority.
- c) The Contractor shall submit to Authority the names and qualifications of the Qualified SWPPP Practitioner (QSP) and Qualified SWPPP Developer (QSD), and a certification of the SWPPP by the QSD. The documentation requested should be available prior to the commencement of the Project, not prior to any earth disturbing activities. Construction mobilization activities have the potential to cause storm water pollution as well as excavation. All of the Project work areas may be addressed in a combined SWPPP, as appropriate.
- d) Site disturbing activity may not begin until the SWPPP has been approved for use, uploaded to Storm Water Multi-Application and Reporting System (SMARTS) and a Waste Discharge Identification (WDID) Number received. Authority will setup the SMARTS website and will be entered as the Legally Responsible Party (LRP). Authority will upload the SWPPP and other SWPPP associated documents electronically into SMARTS. The Contractor will be provided the Notice of Intent (NOI) form or submittal to the State Water Resources Control Board with the applicable fee. The SWPPP shall conform to the provisions in the referenced Manuals, the requirements of the appropriate NPDES permits, including the Construction General Permit, and the Construction Specifications approved by Authority.
- e) The objective of the SWPPP is to identify potential sources of pollution that may reasonably affect the quality of storm water discharge associated with construction activities. The plan will describe and ensure the implementation of Best Management Practices (BMPs) which will be used to reduce pollutants in the storm water discharges from the construction site.
- f) The SWPPP shall include:
  1. Name, location, period of construction and a brief description of the Project.
  2. Contact information for the Authority and Contractor.

## **SPECIAL PROVISIONS**

3. Lists of major construction materials, wastes, and activities at the Project site.
  4. Lists of best management practices to be used to control pollutant discharges from major construction materials, wastes, and activities.
  5. Site plans (construction plans may be used) indicating the selection of BMPs and their location where appropriate.
  6. Non-storm water discharges, their locations, and the BMPs to prevent discharge.
  7. Maintenance and self-inspection schedule of the BMPs to determine the effectiveness and necessary repairs of the BMPs.
  8. Certification statement that all required and selected BMPs will be effectively implemented.
  9. Schedule for the erosion control construction site housekeeping measures and Work included in the Contract for all storm water pollution control measures and BMPs.
  10. Detailed spill prevention and response plan for any volatile and/or otherwise hazardous materials onsite.
  11. Site-specific Water Pollution Control Plans (WPC Plans) shall be included in the SWPPP and shall include site maps showing the Contract drainage, stage construction, contour grading, stockpile locations, construction site entrances, street sweeping, sanitation facilities, washout facilities, waste disposal, hazardous material storage, and water pollution control components, including location of all proposed BMPs. The Contractor shall update the site maps and the WPC Plans to accurately show the actual site conditions at various phases of construction. The WPC Plans shall graphically show the use of temporary water pollution control and temporary erosion control items.
- g) A Best Management Practice is defined as any program, technology, process, operating method, measure, or device that controls, prevents, removes, or reduces pollution. The Contractor shall select appropriate BMPs from the CASQA Storm Water BMP Handbook, in conjunction with all activities and construction operations. BMPs which may be selected include but are not limited to:
1. Construction Practices (NS2, NS3, NS4, and NS6).
  2. Material and Waste Management (WM01, WM02, and WM04).
  3. Vehicle and Equipment Management (NS8, NS9, and NS10).
  4. Physical Stabilization (EC7, EC12, NS4, TC1, and TC2).
  5. Sediment Control Practices (SE1, SE9, SE8, SE10, SE3 and SE2).

## SPECIAL PROVISIONS

- h) If revisions to the SWPPP are required, as determined by Authority, the Contractor shall submit a revised plan within the time frame set forth in this section.
- i) The SWPPP shall be updated and revised due to changes in the Project in accordance with the CGP. The Contractor shall update the SWPPP when changes to the Project affect the site drainage patterns or potential discharge of pollutants to surface waters, groundwater, or a separate municipal storm sewer system. The change shall be recorded by amending (updating) the SWPPP in accordance with the regulatory provisions for SWPPP amendment. The SWPPP shall also be updated to incorporate new measures whenever existing measures are deemed ineffective by Authority or regulatory agency inspectors.
- j) The Contractor shall submit the weekly storm water inspection reports required by the NPDES permits and the SWPPP to Authority no later than one week following the inspection. For potential violations of the NPDES permits, the Contractor shall notify Authority and initiate required corrective action.
- k) The Contractor shall submit all sampling and analyses results required by the NPDES permits and the SWPPP to Authority for review no later than one week following receipt of the analytical results from labs. Results from field testing of pH and turbidity shall be submitted to Authority within 72 hours of the end of a qualifying storm event, as defined by the CGP. Sampling and testing of water quality (discharges) shall be performed in accordance with sampling and analysis requirements provided in the permits and SWPPP. In the event of exceedances, the Contractor shall immediately notify Authority, and initiate corrective action. Documentation of such an event shall be provided to Authority in writing within 24 hours of initiating corrective action. The Contractor shall utilize proper water pollution control measures to ensure that storm water run-off does not exceed water quality limits as contained in the appropriate NPDES permit.
- l) The Contractor shall submit the quarterly non-storm water inspection reports required by the CGP and SWPPP to Authority for review no later than one week following the inspection or previous quarter close, whichever comes first.
- m) The Contractor shall prepare an Annual Report summarizing corrective actions, lab reports, sampling and analyses, and any corrective actions not implemented as per Section XVI of the CGP covering each yearly period in accordance with the permit conditions. The Contractor shall submit Annual Report to Authority for review and, address Authority comments in accordance with the Contract required submittal procedures. As directed by Authority, the Contractor shall provide the documentation to Authority for uploading the final report to the SMARTS by September 1st of each year or in accordance with permit conditions, if permit conditions differ from these data assembly and upload requirements.
- n) The SWPPP shall also include requirements for notifying Authority, and conducting emergency response and cleanup in the event contaminated water reaches any catch basins, ditches, or other receiving waters. All response measures shall be documented, and shall be inspected for effectiveness and maintained in good working order. Ineffective measures shall be repaired or replaced immediately at the Contractor's cost.

## **SPECIAL PROVISIONS**

- o) The Contractor shall notify Authority of any Regional Water Quality Control Board (RWQCB) or other storm water regulatory inspections within 24 hours of the inspection. The Contractor shall provide written notification to Authority of any findings or warnings by the RWQCB.
- p) If either the QSP or the QSD is no longer employed by the Contractor or is no longer associated with the Work, notify Authority within 24 hours, and designate a replacement within 72 hours, so Authority can update SMARTS within 72 hours. The replacement QSD or QSP shall have the registrations/certifications within specified time frame.

### **12.4 PRODUCT FOR STORM WATER POLLUTION CONTROL**

- a) The Contractor shall provide barriers adequate to prevent flow of muddy water, debris, soil and other materials onto the roadway, storm water conveyances and catch basins. Coordinate with the Authority for storm water pollution control requirements.
- b) The Contractor shall provide erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties according to requirements of authorities having jurisdiction.
- c) Products may include but are not limited to fiber rolls, K-rails, filter fabric, sandbags, catch basin inserts, asphalt berms, plastic sheeting, etc.

### **12.5 WATER POLLUTION CONTROL DURING CONSTRUCTION**

- a) General: The Contractor's program to control water pollution shall be included in the SWPPP to prevent any net increase in pollution of storm water runoff from entering waterways. The Contractor is required to implement BMPs necessary to reduce pollutants to meet the minimum water quality protection requirements as defined in the following table.

## SPECIAL PROVISIONS

**Table 1  
Minimum Water Quality Protection Requirements for Construction Projects**

Category	Minimum Requirements	BMP
1. Sediment Control	Sediments generated on the Project site shall be retained using adequate Treatment Control or Structural BMPs.	Sediment Control
2. Construction Materials Control	Construction-related materials, wastes, spills or residues shall be retained at the project site to avoid discharge to streets, drainage facilities, receiving waters, or adjacent properties by wind or runoff.  Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained at the Project sites.	Site Management; Material / Waste Management
3. Erosion Control	Erosion from slopes and channels shall be controlled by implementing an effective combination of BMPs, such as the limiting of grading scheduled during the wet season; inspecting graded areas during rain events; planting and maintenance of vegetation on slopes; and covering erosion susceptible slopes.	Erosion Control

- b) **Training:** Provide Water Pollution Control training as required by the CGP. Training shall be performed by qualified staff and documentation of training shall be kept onsite with the SWPPP documents.
- c) **Water Pollution Control Maintenance:** Furnish sufficient personnel, materials and adequate equipment to perform the water pollution control maintenance work immediately and until each site is fully stabilized. Maintenance work and SWPPP implementation shall be considered as integral functional practices to implement water pollution control. Failure to fully comply with the requirements of the CGP shall subject the Contractor to all fines, damages and job delays incurred due to failure to implement and properly update the SWPPP.
- d) **Water Pollution Control Effectiveness:** If the measures being taken by the Contractor are inadequate to control water pollution effectively, the Authority may direct the Contractor to revise its operations and its SWPPP program.
- e) **SWPPP Implementation:** The Contractor shall be responsible upon approval of the SWPPP and throughout the duration of the Project for installing, constructing, inspecting, maintaining, removing and disposing of the water pollution control measures included in the SWPPP.
  - 1. If the Contractor or Authority identifies a deficiency in any aspect of the implementation of the approved SWPPP or amendments, the deficiency shall be corrected immediately (within 72 hours of identification) and prior to the onset of any precipitation event.
  - 2. If the Contractor fails to conform to the approved SWPPP and requirements of this section, the Authority may order the suspension of construction operations which create or have the potential to create water pollution. Unless otherwise directed by the Authority, the Contractor's responsibility for SWPPP implementation shall continue throughout any temporary suspension of work.

## **SPECIAL PROVISIONS**

3. Implementation of water pollution control practices may vary by season. The SWPPP and this section shall be followed for control practice BMP selection. Throughout the winter season, soil-disturbed areas of the Project sites shall be fully protected at the end of each day with adequate storm water pollution control BMPs unless fair weather is predicted through the following day.
4. The Contractor shall monitor daily weather forecasts. If precipitation is predicted prior to the end of the following workday, construction scheduling shall be modified, as required, and the Contractor shall deploy functioning control measures prior to the onset of the precipitation.
5. No discharges other than storm water may be discharged into the storm drain.

### **12.6 DISCHARGE OF WATER FROM EXCAVATION**

If, at any time during the Work, water must be pumped from an excavation, the pump discharge hose end must be covered with a burlap bag or other effective screening material, to collect dirt and debris and prevent it from entering the street gutters and/or the storm drains. In addition, it may be necessary to use sandbags to divert sediment laden waters away from storm drain and to create settlement areas, preventing significant amounts of sediment and debris from entering the storm drains. Dispose of this sediment in a way appropriate to its composition: if it is clean silt, it may be used as backfill in the excavation. However, if it is contaminated with substances containing chemicals which could harm the environment, it must be treated as a hazardous material and disposed of in an appropriately safe manner.

### **12.7 DECHLORINATION DURING FLUSHING OF MAINS**

Flushed waters that have been super chlorinated to disinfect water mains, following construction, repair or physical cleaning, shall be adequately de-chlorinated, prior to discharge into the street gutter and/or storm drain system (with proper authorization) or discharged directly into the sanitary sewer (with proper authorization) or into a tank truck.

### **12.8 PAYMENT**

The payment for storm water best management practices is included in the Contract Price.

**\*\*\* END OF SECTION 12 \*\*\***