



City of Oroville
1735 Montgomery Street
Oroville, CA 95965
530-538-2401

OROVILLE SEWER PROJECTS - 1D & 1F

ADDENDUM NO. 1

MAY 7, 2020

This addendum forms a part of the Contract Documents and modifies the original Contract Documents as noted below. Acknowledge receipt of this addendum by including a signed copy of this addendum with bidder's proposal. Failure to do so may subject Bidder to disqualification.

Item #1: Responses to Questions

Responses to all Contractor's project questions can be found below.

1. With a bid date of May 12, 2020, when is the expected notice to proceed?
 - a. The City anticipates awarding the contract at the second Council Meeting in June 2020, typically the 3rd Tuesday. Pending approved key submittals and documentation, NTP is expected 3-4 weeks after contract award.
2. Where bypass flow estimates measured?
 - a. No. Bypass flow estimates in Bypass Pumping specification are based on assumed dry weather flows for minimum flow expectations.
3. The intermediate Trench Backfill Material requires 3/8-inch minus material. Would the City consider a 3-inch minus material for trench backfill?
 - a. No. However, the City would review a contractor's proposal for a 1-inch minus Native material re-use. A sieve analysis would need to be provided of the processed native backfill.
4. Does the City have the specifications/manufacturer of the pavers used on the crosswalks on Montgomery Street?
 - a. Specifications not available at this time. However, the City does have a extra pallet of them at the corporation yard. City's expectation is that existing and unbroken pavers would be removed and salvaged as much as possible ahead of sewer trench excavation.
5. Is there a City Property adjacent to the project that can be used for staging?
 - a. The City can make a portion of the paved parking area (1-acre) east of Memorial Auditorium available for the Contractor's use during construction via encroachment permit at no charge. However, fencing and security of the site during construction would be the contractor's responsibility.

Item #2: Changes to Specifications

Section 01666: References to Section 15071 have been removed.

Section 02100: References to Section 02270 have been removed.

Item #3: Changes to Plans

Sheet C-11: Manhole steps have been removed from Detail 1.

Thank you in advance for your bids.



Mike Massaro, P.E.
BENJEN, Project Manager



I acknowledge receipt of this addendum and all attachments by including a signed copy of this addendum with bidder's proposal. Failure to do so may subject Bidder to disqualification.

Bidders Signature

Date

SECTION 01666

TESTING OF GRAVITY SEWER LINES AND MANHOLES

PART 1: GENERAL

1.01 DESCRIPTION

- A. The work of this section consists of testing gravity sewer lines and gravity sewer manholes. Repaired work shall be retested.
- B. Testing Methods: Gravity sewer lines - air test; manholes – vacuum test.

1.02 QUALITY ASSURANCE

- A. Flow meters shall record the actual volume plus or minus 2 percent.
- B. Air test gauges shall be ANSI/ANSI B40.1, Grade 3A (plus or minus 0.25 percent of full-scale accuracy), and 15 psi dial range.

1.03 SUBMITTALS

- A. Accuracy certification by approved independent testing labs for flow meters and test gauges. Certifications shall be dated no more than 90 days prior to actual system testing.
- B. Prior to testing, provide the following information:
 - 1. All Tests: Describe precautions that will be taken to protect system equipment that might be damaged under test pressures, and the proposed method for rerouting sewer flows where the system must remain in service.
 - 2. Air Test: Describe safety devices on air test equipment and personnel safety precautions during air.

1.04 PROJECT CONDITIONS

- A. Testing shall not be performed until each system has been flushed or thoroughly cleaned in accordance with procedures in the section that describes sewer line installation.

PART 2: MATERIALS - NOT USED

PART 3: EXECUTION

3.01 GENERAL

- A. Prepare each section for testing, using adequate bracing; protect system equipment susceptible to damage by test pressures; make provision for installation of Agency's pressure gauge in parallel with Contractor's gauge, if so requested; and maintain services where required.

3.02 GRAVITY SEWER SYSTEMS

- A. Air Test: Test lines less than or equal to 30 inches in diameter between manholes with low pressure air. Safety requires regulator or relief valve on pressurizing equipment, set at 8 psig. No one will be allowed in manholes while there is air pressure against test plugs.

Lines greater than 30-inches in diameter shall include individual joint testing as specified per these specifications or the manufacturer.

- B. Plug all pipe outlets to resist test pressure. Give special attention to laterals. Plug all other pipes in both upstream and downstream manholes.
- C. Supply air into the line until the test pressure of 3.5 psi in excess of the ground water pressure is attained or 8 psi, whichever is greater. Allow at least 5 minutes for air temperature in the test section to stabilize.
- D. Reestablish the test pressure, and start a stop watch. Determine the time required for pressure to drop 1.0 psig.
- E. For 6-inch and smaller pipe only, if the pressure does not drop during the stabilization period, and no additional air has been added, the section undergoing test will have passed without further testing.
- F. The pipe section will also have passed if the time observed for the pressure to drop 1.0 psig is greater than that determined by using Table 1.

Determine the test time from Table 1 (minimum time 60 seconds).

SIZE	Time per 100-foot	SIZE	Time per 100-foot	SIZE	Time per 100-foot
4-inch	0.3-min.	12-inch	1.8-min.	24-inch	3.6-min
6-inch	0.7-min.	15-inch	2.1-min.	27-inch	4.2-min.
8-inch	1.2-min.	18-inch	2.4-min.	30-inch	4.8-min.
10-inch	1.5-min.	21-inch	3.0-min.		

- G. When a combination of more than one pipe size is under test, the calculated time for the larger pipe shall apply.
- H. For larger sewer pipes, refer to the material specification for testing requirements.

3.03 VISUAL TEST FOR PIPELINES

Interior visual inspection shall be conducted by the Contractor. The Contractor's Inspector shall visibly inspect the line and record findings. Copies of video inspection shall be provided to the City Engineer for review and acceptance of work.

The sewer system shall be completely cleaned by an approved method prior to visual inspection. The sewer system shall be rejected if any of these conditions exist:

- A. Standing water or sags greater than ½-inch in depth.

- B. Standing water in services.
- C. Offset joints.
- D. Cracked pipe.
- E. Infiltration.

3.04 DEFLECTION TESTING OF FLEXIBLE PIPE

All flexible PVC pipe shall be tested for over-deflection and not exceed maximum deflection as specified by the Manufacturer.

3.05 LEAKAGE TEST FOR MANHOLES

Sewer manholes shall pass a vacuum test consisting of the following criteria and procedures:

- A. The Contractor shall notify the Engineer at least 72-hours in advance to be present during testing without exception.
- B. The test shall be performed after assembly of the manhole, but prior to backfilling. The Contractor shall perform the test and supply all test equipment. A City Inspector shall witness the test results.
- C. Lift holes shall be filled with non-shrinking grout prior to testing.
- D. Pipe entering and existing the manhole shall be plugged. Securely brace the plugs to prevent them from being drawn into the manhole. Unused channels shall be permanently plugged with a plastic or clay stop and filled with grout.
- E. A vacuum of 10-inches of mercury shall be drawn to start the test. The amount of time required for the vacuum to drop to 9-inches shall be measured. The manhole will pass the test if the amount of elapsed time is greater than 60 seconds for a 48-inch manhole, 75 seconds for a 72-inch manhole, and 120 seconds for an 84-inch manhole. A liquid filled with vacuum gauge shall be used for testing.
- F. If the manhole fails the initial test, necessary repairs shall be made with a non-shrink grout while the vacuum is still being drawn. Retesting shall proceed until the elapsed times are satisfactory.
- G. After passing the vacuum test, all joints shall then be mortared, inside and out. Outside mortared joints shall be allowed to dry before backfilling.

END OF SECTION

SECTION 02100

DEMOLITION, CLEARING, GRUBBING, AND STRIPPING

PART 1: GENERAL

1.01 DESCRIPTION

Work Included: Demolition, clearing, grubbing, and stripping required for this work includes, but is not necessarily limited to:

- A. Felling and removal of trees, stumps, roots, and tree debris.
- B. Removal of surface rock and all debris.
- C. Removal of surface organic topsoil layer.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 02200: Earthwork
- B. Section 02223: Trenching, Backfilling, and Compacting
- C. Section 02225: Structure Excavation and Backfill

1.03 LIMITS OF WORK

Perform demolition, clearing, grubbing, and stripping operations to the following limits:

- A. Demolition: Perform demolition of existing facilities as designated on the contract drawings.
- B. Clearing: Perform clearing operations throughout the project site, including, but not limited to, areas upon which facilities, ponds, roadways, structures, landscaping or structural fill will be placed, and all borrow sites.
- C. Grubbing: Perform grubbing operations at all locations identified for clearing.
- D. Stripping: Perform stripping operations at the following locations as:
 - 1. The area of the plant site.
 - 2. The new access roadways.
 - 3. The effluent pipeline corridor.
 - 4. The pond sites
 - 5. Irrigation/borrow fields, as required to meet fill requirements
- E. Any and all areas that have been demolished, cleared, grubbed or stripped that has not be covered by any other order of work and is left as bare or native ground ,excluding the irrigation fields, shall have a finishing treatment applied at the discretion of the engineer and may consist of one of the following: hydroseeded and continuously irrigated until established, covered with 2-inch Class 2 aggregate base and compacted to 95%, paved, or receive authorization by the engineer to remain it the native state.

1.04 CLEARING

Remove and dispose of trees, snags, stumps, shrubs, brush, limbs, and other vegetative growth to the limits defined in Section 1.03. Remove all evidence of branches greater than 1-inch in diameter of thickness. Remove and dispose of trash piles and rubbish. Protect structures and piping above and below ground, trees, shrubs, and vegetative growth and fencing which are not designated for removal or which exist outside project limits.

1.05 GRUBBING

After clearing, remove and dispose of wood or root matter, including stumps, trunks, roots, or root systems greater than 1-inch in diameter to the limits defined in Section 1.03.

1.06 STRIPPING

After grubbing, strip the organic material to the limits defined in Section 1.03 to a depth of not less than 6-inches or to a depth required to remove all deleterious matter, vegetation, or cementations larger than 1 inch in the maximum dimension. Upon completion of the stripping operation, the remaining material, if utilized for structural fill, shall not exceed a concentration of organics in excess of 3 percent by dry weight. Dilution shall be accomplished by means of disking.

Stripping material shall be stockpiled onsite. All stockpiled material, including existing stockpile in irrigation fields, shall be spread across the borrow site to drain towards the tailwater ditch.

1.07 QUALITY ASSURANCE

- A. Qualifications of Workmen: Provide at least one person who shall be present at all times during tree clearing and grubbing operations and who shall be thoroughly familiar with the types of trees involved and who shall direct the trimming of roots and limbs where required.
- B. Codes and Standards: In addition to complying with all pertinent codes and regulations, comply with the requirements of those insurance carriers providing coverage for this work.

1.08 JOB CONDITIONS

- A. Dust Control: Use all means necessary to prevent the spread of dust during performance of the work; thoroughly moisten all surfaces as required to prevent dust being a nuisance to the public, neighbors, and concurrent performance of other work on the site. Wind in excess of 10 MPH causing dust to leave site will require Contractor to limit dust causing activities.
- B. Burning: On-site burning will not be permitted.
- C. Protection: Use all means necessary to protect existing objects designated to remain and, in the event of damage, immediately notify the Engineer and make all repairs and replacements necessary for approval by the Engineer at no additional cost to the Owner.

PART 2: MATERIALS

2.01 TEMPORARY BARRICADES

Unless otherwise specifically approved by the Engineer, use only new and solid lumber of utility grade or better to construct temporary barricades around the objects designated to remain.

2.02 PRUNING PAINT

Use only a pruning paint specially formulated for horticultural application to cut or damaged plant tissue and approved by the Engineer for use on this work.

2.03 EXPLOSIVES

Do not use explosives on this project.

2.04 OTHER MATERIALS

All other material not specifically described but required for proper completion of the work of this Section, shall be as selected by the Contractor subject to approval of the Engineer.

PART 3: EXECUTION

3.01 PREPARATION

- A. Notification: Notify the Engineer at least two full working days prior to commencing the work of this section.
- B. Site Inspection:
 - 1. Prior to all work of this section, carefully inspect the entire site and all objects designated to be removed and to be preserved.
 - 2. Locate all existing inactive utility lines to be encountered by the new work and determine all requirements for disconnecting and capping. Abandonment of piping requires capping at each end or plugging with concrete to the satisfaction of the Engineer.
 - 3. Locate all existing active utility lines traversing the site and determine the requirements for their protection.
- C. Clarification:
 - 1. The Drawings do not purport to show all objects existing on the site.
 - 2. Before commencing the work of this section, verify with the Engineer all objects to be removed and all objects to be preserved.
- D. Scheduling:
 - 1. Schedule all work in a careful manner with all necessary consideration for neighbors, operation of existing facilities, and the public.
 - 2. Avoid interference with the use of, and passage to and from, adjacent buildings and facilities.

- E. Disconnection of Utilities: Before starting site operations, disconnect or arrange for the disconnection of all utility services designated to be removed, performing all such work in accordance with the requirements of the utility company or Owner involved.
- F. Protection of Utilities: Preserve in operating condition all active utilities traversing the site and designated to remain.

3.02 STRUCTURE DEMOLITION

- A. Facilities so designated on the plans shall be demolished, and all materials therefrom shall become the property of the Contractor and shall be removed and disposed of away from the site. Any equipment or pipework connected within a structure which is designated to be removed and saved or relocated shall be removed before demolition begins. All other equipment within the structure shall become the property of the Contractor.
- B. All concrete and rock shall be removed to firm undisturbed soil and scarified to a depth of 12 inches, unless otherwise noted, and shall be disposed of off-site. Concrete not removed shall be broken to prevent entrapment of water, as directed by the Engineer. Concrete includes all reinforcement and embedded items. Pipework and conduit within 10 feet of a structure shall also be removed to firm undisturbed soil and scarified to a depth of 12 inches unless otherwise noted.
- C. Safety Requirements: The Contractor's attention is directed to the provisions of Subpart T of the OSHA Safety and Health Standards for Construction and the provisions of Article 31 of the Construction Safety Orders of the California Division of Industrial Safety governing the work of demolition. The Contractor shall perform all the work hereunder in accordance with said provisions, and where in conflict, the more stringent shall apply.
- D. Backfill and Grading: After facilities have been demolished and all material removed, any remaining depression or hole shall be backfilled, and the area finish graded as specified in Section 02200. Rubble and broken concrete will not be allowed to be used as fill material.

3.03 ROADWAY DEMOLITION

- A. Where shown on the contract drawings, the Contractor shall remove entire pavement section including base material. This will also be necessary where deemed by the Engineer that extensive pipe construction has caused a loss of pavement integrity. Base material may be stockpiled and reused where appropriate and only with the approval of the Engineer.
- B. Asphalt concrete, concrete curb, and gutter materials to be demolished shall be removed from the site by the Contractor at no additional cost to the Owner.

3.04 PIPE DEMOLITION

- A. Unless otherwise specified, or in conflict with a proposed pipeline or structure, all pipes shown to be demolished shall be abandoned in place and have each end capped with at least a 24-inch long plug of concrete or grout material within the pipe. Piping subject to internal pressure upon abandonment shall be capped with pressure retaining caps or plugs.

- B. All pipe materials to be removed including pipe, fittings, valves, and thrust blocking shall be removed from the site by the Contractor at no additional cost to the Owner.

3.05 CLEARING AND GRUBBING

A. Area to be Cleared and Grubbed:

1. The Contractor shall restrict clearing and grubbing to the areas designated for new construction or adjustment of grades on the plans. Surrounding trees shall be protected from damage.
2. Where limbs or roots of trees designated to remain extend into work areas, the limbs or roots shall be trimmed in accordance with the provisions of this section.

B. Felling of Trees:

1. Use all necessary care to protect the roots and branches of trees designated to remain, and to prevent damage to persons and properties.
2. Immediately after felling a tree, remove the branches, cut trunk and limbs as necessary for removal, and clear the debris. Remove tree roots within a minimum of 3 feet below the existing grade.

C. Trimming of Trees:

1. In company with the Engineer, ascertain the limbs and roots which are to be trimmed and clearly mark them to designate the approved point of cutting.
2. Cut evenly, using proper tools and skilled workmen to achieve neat severance with the least possible damage to the tree.
3. Promptly coat the cut area with the approved pruning paint in strict accordance with the manufacturer's recommendations.
4. In the case of root cuts, apply wet burlap or other protection approved by the Engineer, as required, to prevent drying out.

D. Grubbing:

1. Remove all surface rocks and all stumps, roots, and vegetation within the limits of construction. Roots shall be removed to at least 2.5 feet below proposed finish grade.

3.06 PLACEMENT OF STRIPPINGS

Strippings shall be removed from the site. The contractor may coordinate with the Engineer to stockpile strippings and then spread on project site area should a specific site area be available.

3.07 CONSTRUCTION OF BARRICADES

A. Layout:

1. At all trees designated to be preserved, construct a temporary barricade around the tree at the tree's approximate drip line.

2. Construct barricades at least three feet high, consisting of two inch by four inch or larger posts set at least 18 inches into the ground at not more than six feet on centers, joined at the top by one inch by six inch or larger boards firmly nailed to the posts. Metal post with orange safety fencing may also be used if allowed by the local Owner having jurisdiction.
- B. Protection:
1. Take special care in setting posts to not damage tree roots.
 2. Do not permit stockpiling of materials or debris within the barricaded area nor permit the earth surface to be changed in any way except as specifically approved by the Engineer.
- C. Maintenance: All protective fencing shall be inspected and maintained by the contractor at weekly intervals. Any damaged fencing shall be restored within one week.
- D. Removal of Barricades: All protective fencing including posts and fabric shall be removed from the site at the completion of the work at the Contractor's expense.

3.08 REMOVAL OF DEBRIS

- A. Remove all debris from the site and leave the site in a neat and orderly condition to the approval of the Engineer. Dispose of debris off site at a location approved by the Engineer.
- B. Removal of demolished materials shall be included in the applicable lump sum base bid item and shall not be paid on a unit cost basis.

END OF SECTION

