



SECTION 01 29 00

PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. For each BID item, the WORK will be measured and paid for on either a unit price basis or on a lump sum basis. The quantities provided on the BID are estimates of the actual quantities of WORK only, and are included solely for determining the probable cost of WORK. The actual quantities of WORK may differ from the BID quantities. The basis of measurement and payment for each unit price BID item will be the actual amount of WORK authorized, completed, and accepted. All labor, equipment, materials, and any incidentals required to complete the WORK will be considered subsidiary to that BID item and will not be measured or paid for separately. The CONTRACTOR agrees to make no claim for damages, loss of anticipated profits, or otherwise, due to differences between the actual WORK quantities and the estimated BID quantities.
- B. Payment will be made only for each item included in the BID. No WORK will be paid for that is not completed in accordance with the DRAWINGS and SPECIFICATIONS, and accepted by the ENGINEER. Except as may be otherwise stipulated, no labor, equipment, materials, or any incidentals required to complete the WORK will be furnished by OWNER.
- C. The basis of measurement and payment for each BID item is described below. A general listing of BID items, accompanied by a brief summary of the WORK, is provided below. It is not intended to completely describe all WORK. Refer to the DRAWINGS and SPECIFICATIONS for detailed information on each BID item.
- D. These Payment Procedures shall not be modified. Changes, additions, or deletions of BID items, as necessary, to meet PROJECT requirements shall be included in 00 73 00 Supplementary Conditions.

1.02 MEASUREMENT AND PAYMENT PROCEDURES

A. GN – GENERAL

1. Bid Item GN-01-001: Clearing and Grubbing

- a. The measurement for payment for this item will be the actual number of acres of clearing and grubbing completed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. Measurement will be based upon scaled dimensions in acres of clearing and grubbing, as defined on the DRAWINGS and SPECIFICATIONS. No payment will be made for clearing and grubbing outside of the limits of construction shown on the DRAWINGS and SPECIFICATIONS or for WORK required to repair damage done by the CONTRACTOR's operations. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:



- 1) Completing the clearing and grubbing
 - 2) Disposing of materials off site in accordance with the DRAWINGS and SPECIFICATIONS
 - 3) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on the percentage of completed and accepted WORK.

<u>Bid Item</u>	<u>Pay Unit</u>
Clearing and Grubbing	AC

2. Bid Item GN-02-001: Mobilization

- a. No separate measurement for payment will be made for any labor, equipment, and materials required for this item. The lump sum price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
- 1) Furnishing, installing and removing temporary fencing and construction markers around PROJECT work areas and any other fencing/security items as deemed necessary by the CONTRACTOR
 - 2) Establishing and removing the CONTRACTOR's offices, buildings, and other necessary facilities
 - 3) Obtaining, complying with, and transferring permits
 - 4) Providing environmental controls for the life of the PROJECT
 - 5) Providing required bonds and insurance
 - 6) Preparing and maintaining the PROJECT schedule
 - 7) Delivering and removing the CONTRACTOR's equipment, supplies, and excess materials, and cleaning up the site
 - 8) Restoring the PROJECT site to pre-project or final grades and conditions
 - 9) Preparing and securing approvals of submittals
 - 10) Preparing record drawings
 - 11) Preparing and providing copies of stormwater and other required reports
 - 12) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Fifty (50) percent of the lump sum price will be paid at the time of the first monthly progress payment; an additional thirty (30) percent will be paid when one-half the original CONTRACT amount is earned. The remaining twenty (20) percent will be paid upon final acceptance of the PROJECT. The total amount for mobilization will not exceed five (5) percent of the total BID.

<u>Bid Item</u>	<u>Pay Unit</u>
Mobilization	LS



3. Bid Item GN-03-001: Potholing

- a. The measurement and payment for potholing will be on a per each basis for each pothole prior to construction. Utilities shown on the DRAWINGS to be exposed and protected as part of the construction operations are not included in this item. The CONTRACTOR will only pothole under this item as directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Coordinating with utility companies
 - 2) Locating and protecting all existing utilities in and along the PROJECT reach
 - 3) Identifying the utility type, depth, and dimensions prior to construction
 - 4) Preparing and submitting pothole logs to the ENGINEER
 - 5) Backfilling potholes and patching roadway, as required
- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Potholing	EA

4. Bid Item GN-04-001: Surveying

- a. No separate measurement for payment will be made for any labor, equipment, and materials required for this item. The lump sum price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Staking horizontal and vertical alignments
 - 2) Providing cut sheets to the OWNER or OWNER's representative
 - 3) Providing replacement stakes
 - 4) Locating existing utilities
 - 5) Staking overlot grading
 - 6) Setting subgrade elevations and offsets
 - 7) Setting temporary control points
 - 8) Re-establishing land monuments
 - 9) Finishing grades and structure elevations by a Professional Licensed Surveyor, as required, for record or as-built DRAWINGS
 - 10) Finishing grades and elevations by a Professional Licensed Surveyor, as required, for Pond Volume Certification
 - 11) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on the percentage of completed and accepted WORK.

Bid Item	Pay Unit
Surveying	LS



5. Bid Item GN-05-001: Traffic Control

- a. No separate measurement for payment will be made for any labor, equipment, and materials required for this item. The lump sum price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Preparing, implementing, adjusting as necessary, and maintaining the CONTRACTOR's approved Traffic Control Plan
 - 2) Updating and submitting traffic control plans, as necessary, according to city, county, and other applicable regulations
 - 3) Preparing, implementing, maintaining, and adjusting, as necessary, pedestrian controls
 - 4) Providing all other related and necessary labor, equipment, pavement markings, and materials to complete the WORK

- b. One third of the lump sum price for this item will be paid after twenty-five (25) percent of the original CONTRACT amount has been earned, the second third will be paid after fifty (50) percent of the original CONTRACT amount has been earned, and the final third upon final acceptance of the PROJECT.

Bid Item	Pay Unit
Traffic Control	LS

6. Bid Item GN-06-001: Water Control

- a. No separate measurement for payment will be made for any labor, equipment, and materials required for this item. The lump sum price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Preparing and submitting water control plan for review
 - 2) Implementing measures to control surface water and groundwater not paid for under Bid Item ESC-07-001, Temporary Diversion Measure or ESC-16-001. Temporary Slope Drain
 - 3) Providing temporary power and sound proofing, as required
 - 4) Evaluating, designing, constructing, maintaining, replacing, and monitoring dewatering measures
 - 5) Modifying the approved and implemented water control plan as necessary
 - 6) Furnishing and installing all materials, sediment basins, diversion measures, slope drains, check dams, pumps, dewater bags, earth embankments, sheet pile, wells, stream crossings or any other material necessary for water control
 - 7) Obtaining all required permits
 - 8) Monitoring, sampling and analysis, and preparing water quality reports, if required
 - 9) Protecting WORK from groundwater, base flows, and storm events



- 10) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. One third of the lump sum price for this item will be paid after twenty-five (25) percent of the original CONTRACT amount has been earned, the second third after fifty (50) percent of the original CONTRACT amount has been earned, and the final third will be paid upon final acceptance of the PROJECT.

<u>Bid Item</u>	<u>Pay Unit</u>
Water Control	LS

7. Bid Item GN-07-001: Project Sign

- a. The measurement for payment for this item will be on a per each basis placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by ENGINEER. The unit price will include all of CONTRACTOR's costs. This BID item includes:
 - 1) Coordination with ENGINEER and OWNER regarding overall sign content, layout and placement
 - 2) Submitting layout for review and approval prior to sign production
 - 3) Furnishing, transporting, and installing all materials including sign, supports, bracing, and necessary hardware
 - 4) Excavation and compaction
 - 5) Removing sign after project close-out
 - 6) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Project Sign	EA

8. Bid Item GN-08-001: Facility Condition Survey

- a. No separate measurement for payment will be made for any labor, equipment, and materials required for this item. The lump sum price will include all of CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Evaluating the PROJECT's proximity to residential structures and assessing all risk involved regarding potential damage to property, structures and homes from CONTRACTOR's proposed construction operations, means and methods
 - 2) Preparing and submitting a risk assessment report to OWNER for the OWNER's review that documents the CONTRACTOR's assessment and CONTRACTOR's



- inventory of at-risk structures selected for a pre-construction structural survey of facilities
- 3) Contracting with qualified, independent consultants to perform pre-construction facility condition surveys to document, video, and /or photograph the pre-project condition of facilities
 - 4) Contracting with qualified, independent consultants to perform follow-up facility condition surveys to document, video, and /or photograph the condition of facilities at any time necessary
 - 5) Performing pre-construction facility surveys for the specified properties
 - 6) Performing facility condition surveys for all additional property as deemed necessary by the CONTRACTOR
 - 7) Preparing and submitting copies of all facility condition survey reports, files, photos and videos for all properties surveyed to the OWNER

- b. Payment will be based on the percentage of completed and accepted WORK.

Bid Item	Pay Unit
Facility Condition Survey	LS

9. Bid Item GN-09-001: Vibration Monitoring

- a. No separate measurement for payment will be made for any labor, equipment, and materials required for this item. The lump sum price will include all the CONTRACTOR's costs. This BID item includes, but is not limited to:
- 1) Evaluating the PROJECT's proximity to residential structures and assessing all risk involved regarding potential damage to private property, structures and homes from CONTRACTOR's proposed construction operations, means and methods
 - 2) Selecting appropriate construction means and methods to minimize construction vibrations while completing the PROJECT; while minimizing risk to adjacent structures
 - 3) Contracting with qualified, independent consultants to perform vibration monitoring along the project alignment and periodic observations of CONTRACTOR's operations, means and methods
 - 4) Preparing and submitting a vibration monitoring plan to OWNER for OWNER's review
 - 5) Performing and submitting baseline readings of CONTRACTOR's proposed operations, means and methods
 - 6) Performing continuous vibration monitoring during the demolition and installation and backfill of the storm sewer outfall and collection system at a minimum
 - 7) Preparing and submitting weekly reports to the OWNER or as requested by the OWNER



- b. Payment will be based on the percentage of completed and accepted WORK.

<u>Bid Item</u>	<u>Pay Unit</u>
Vibration Monitoring	LS

B. ESC - EROSION AND SEDIMENT CONTROL

1. Bid Item ESC-01-001: General BMP Maintenance

- a. The measurement for payment for this item will be the actual number of hours of equipment and labor required to maintain all BMPs in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by ENGINEER. Prior to performing maintenance on any BMP, the CONTRACTOR shall meet with the ENGINEER to determine what maintenance is required and to estimate the number of hours required to perform the maintenance. The unit price will include all of CONTRACTOR'S costs. This BID will include but is not limited to:

- 1) Furnishing and installing all materials required to maintain BMPs
- 2) Furnishing all labor and equipment required to maintain BMPs
- 3) Implementing and adjusting as necessary the approved Erosion and Sediment Control Plan in accordance with the DRAWINGS and SPECIFICATIONS
- 4) Performing sediment removal
- 5) Sweeping public right-of-way along the project limits and haul routes as necessary
- 6) Replacing BMPs if necessary
- 7) Inspecting and maintaining all erosion and sediment control measures and replacing as necessary
- 8) Providing all other related and necessary labor, equipment, and materials to complete the WORK

- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
General BMP Maintenance	HOUR

2. Bid Item ESC-02-001: Brush Barrier

- a. The measurement for payment for this item will be per linear foot of brush barrier placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Excavating trench
- 2) Collecting, placing, and constructing brush barrier
- 3) Providing and installing filter fabric, including all necessary anchors, as shown on DRAWINGS
- 4) Removing brush barrier, including haul off and disposal, upon approval



- 5) Providing all other related and necessary labor, equipment, and materials required to complete the WORK
- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Brush Barrier	LF

3. Bid Item ESC-03-001 to ESC-03-002: Check Dam

- a. The measurement for payment for this item will be the actual number of cubic yards of check dam placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Excavating and removing material
- 2) Providing and placing riprap
- 3) Removing check dam, including haul off and disposal, upon approval
- 4) Restoring area to pre-project or final grades and conditions
- 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK

- b. Payments will be based on units completed and accepted.

Bid Item	Pay Unit
Check Dam	CY

4. Bid Item ESC-04-001: Compost Blanket and Berm

- a. The measurement for payment for this item will be per square yard of compost blanket and berm placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Preparing soil as shown on the DRAWINGS
- 2) Providing and installing compost blanket or berm
- 3) Weed control
- 4) Replacing compost and berm to original design, as required, throughout PROJECT duration
- 5) Removing compost blanket and berm, including haul off and disposal, upon approval
- 6) Providing all other related and necessary labor, equipment, and materials to complete the WORK

- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Compost Blanket and Berm	SY



5. Bid Item ESC-05-001: Concrete Washout Area

- a. The measurement for payment for this item will be per each concrete washout area placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Excavating pit, constructing berm, or utilizing an approved pan/tub concrete washout service
 - 2) Providing and installing vehicle tracking control (crushed rock and riprap)
 - 3) Providing and installing construction fence and sign
 - 4) Removing concrete washout and concrete material, upon approval
 - 5) Restoring area to pre-project or finished grades and conditions
 - 6) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Concrete Washout Area	EA

6. Bid Item ESC-06-001: Culvert Inlet Protection

- a. The measurement for payment for this item will be per each culvert inlet protection placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Providing and placing the approved culvert inlet protection
 - 2) Removing and restoring, upon approval
 - 3) Restoring area to pre-project or finished grades and conditions
 - 4) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Culvert Inlet Protection	EA

7. Bid Item ESC-07-001: Diversion Measure, Temporary

- a. The measurement for payment for this item will be the actual number of linear feet of diversion measure placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:



- 1) Excavating and stockpiling material
- 2) Furnishing and installing lining or pipe
- 3) Backfilling, revegetating, and compacting channel to finished grades
- 4) Reconditioning material, as necessary, to meet moisture-density requirements
- 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Diversion Measure, Temporary	LF

8. Bid Item ESC-08-001: Earth Dike and Drainage Swale

a. The measurement for payment for this item will be the actual number of linear feet of earth dike and drainage swale placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Excavating and stockpiling material
- 2) Furnishing and compacting swales
- 3) Furnishing materials and constructing earth dike
- 4) Providing and installing a sediment trap or basin
- 5) Providing and installing geotextile or mat, anchors, and crushed rock
- 6) Installing a temporary culvert, as required
- 7) Removing earth dike and drainage swale, upon approval
- 8) Restoring area to pre-project or finished grades and conditions
- 9) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Earth Dike and Drainage Swale	LF

9. Bid Item ESC-09-001: Inlet Protection
Bid Item ESC-09-002: Outlet Protection

a. The measurement for payment for these items will be per each inlet and outlet protection placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Providing and placing the approved inlet or outlet protection
- 2) Removing and restoring, upon approval
- 3) Restoring area to pre-project or finished grades and conditions



- 4) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Inlet Protection	EA
Outlet Protection	EA

10. Bid Item ESC-10-001: Rock Sock / Curb Sock

a. The measurement for payment for this item will be the actual number of linear feet of rock sock placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Providing and placing rock sock with approved aggregate
- 2) Inspecting and adjusting rock sock daily
- 3) Removing and restoring, upon approval
- 4) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Rock Sock / Curb Sock	LF

11. Bid Item ESC-11-001: Rough Cut Street Control

a. The measurement for payment for this item will be per each rough cut street control placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Providing and installing geotextile socks filled with crushed rock or compacted earthen berms
- 2) Removing prior road surfacing and paving
- 3) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Rough Cut Street Control	EA



12. Bid Item ESC-12-001: Sediment Basin

- a. The measurement for payment for this item will be the actual number of square yards of sediment basin placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Excavating and stockpiling berming material with appropriate BMPs
 - 2) Re-grading and compacting basin to pre-existing or finished grades
 - 3) Restoring area to pre-project or finished grades
 - 4) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Sediment Basin	SY

13. Bid Item ESC-13-001: Sediment Control Log

- a. The measurement for payment for this item will be the actual number of linear feet of sediment control log placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Providing and installing sediment control log and stakes
 - 2) Removing, upon approval
 - 3) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Sediment Control Log	LF

14. Bid Item ESC-14-001: Sediment Trap

- a. The measurement for payment for this item will be per each sediment trap placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Excavating and stockpiling material with appropriate BMPs
 - 2) Furnishing rock, compacting soils, and installing all materials, as required
 - 3) Removing, upon approval
 - 4) Restoring area to pre-project or finished grades
 - 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK



- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Sediment Trap	EA

15. Bid Item ESC-15-001: Silt Fence

- a. The measurement for payment for this item will be the actual number of linear feet of silt fence placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Providing and installing fence material, posts, and stakes
 - 2) Removing and disposing, including buried sections, upon approval
 - 3) Restoring (including revegetation) to pre-project conditions or as shown on the DRAWINGS
 - 4) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Silt Fence	LF

16. Bid Item ESC-16-001: Slope Drain, Temporary

- a. The measurement for payment for this item will be the actual number of linear feet of slope drain placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Excavating and stockpiling material with appropriate BMPs
 - 2) Furnishing and installing slope drain
 - 3) Backfilling and compacting channel to finished grades
 - 4) Restoring area to pre-project or finished grades
 - 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Slope Drain, Temporary	LF

17. Bid Item ESC-17-001: Stabilized Construction Roadway
 Bid Item ESC-17-002: Stabilized Staging Area

- a. The measurement for payment for this item will be the actual number of square yards of construction roadway or staging area stabilization



placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. Any additional excavation and backfill made by the CONTRACTOR below or above the design subgrade elevation, without the prior acceptance of the ENGINEER, will be at the responsibility of the CONTRACTOR. The unit price will include all of CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, placing, removing, and disposing of rock surfacing and geotextile
 - 2) Installing necessary signage
 - 3) Installing necessary erosion control measures required outside what is shown on the erosion control plans
 - 4) Removing and disposing all rock and geotextiles
 - 5) Restoring area to pre-project or finished grades and conditions
 - 6) Furnishing and placing fencing and screen as shown on the DRAWINGS
 - 7) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Stabilized Construction Roadway	SY
Stabilized Staging Area	SY

18. Bid Item ESC-18-001: Straw Bale Barrier

- a. The measurement for payment for this item will be the actual number of linear feet of straw bales barrier placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
- 1) Providing and installing straw bales and stakes
 - 2) Removing and restoring area, upon approval
 - 3) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Straw Bale Barrier	LF

19. Bid Item ESC-19-001: Stream Crossing, Temporary, with Culvert
Bid Item ESC-19-002: Stream Crossing, Temporary, with Ford

- a. The measurement for payment for this item will be per each temporary stream crossing placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's



costs. All materials and work required to install, maintain, replace, repair the crossing or adjacent work areas caused by flood damage, and relocate the crossing to accommodate the various work phases will not be measured and paid for separately, but will be included in each crossing. The BID item includes, but is not limited to:

- 1) Excavating and removing materials
- 2) Providing and placing geotextile fabric, riprap, and gravel
- 3) Providing and placing culvert as shown on DRAWINGS
- 4) Removing and restoring area, upon approval
- 5) Restoring area to pre-project or finished grades and conditions
- 6) Providing all other related and necessary labor, equipment, and materials to complete the WORK

a. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Stream Crossing, Temporary, with Culvert	EA
Stream Crossing, Temporary, with Ford	EA

20. Bid Item ESC-20-001 to ESC-20-004: Vehicle Tracking Control

a. The measurement for payment for this item will be based on the actual number of square yards of vehicle tracking control placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Providing and placing geotextile fabric, construction mat, TRM, crushed rock, and riprap, as shown on the DRAWINGS
- 2) Excavating and removing material
- 3) Removing vehicle tracking control, upon approval
- 4) Restoring area to pre-project or final grades and conditions, including revegetation
- 5) Providing and installing metal rack and sediment trap as shown on the DRAWINGS
- 6) Providing and installing power washing equipment
- 7) Power washing the equipment and vehicles
- 8) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Vehicle Tracking Control	SY



21. Bid Item ESC-21-001: Street Maintenance

- a. The measurement for payment for this item will be based on the actual number of lane miles of street maintained in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Daily sweeping and cleaning of roads and streets in the project area impacted by construction operation as shown in the DRAWINGS
 - 2) Furnishing, transporting and storing any equipment necessary to complete WORK
 - 3) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Fifty (50) percent of the lump sum price will be paid at the time of the first monthly progress payment; an additional thirty (30) percent will be paid when one-half the original CONTRACT amount is earned. The remaining twenty (20) percent will be paid upon final acceptance of the PROJECT. The total amount for mobilization will not exceed five (5) percent of the total BID.

<u>Bid Item</u>	<u>Pay Unit</u>
Street Maintenance	LM

22. Bid Item ESC-22-001: Tree Protection, Fence

- a. The measurement for payment for this item will be the actual number of linear feet of tree protection fence placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Furnishing, installing, and adjusting all materials, including posts, rails, wire, fabric, concrete, and nails as shown on the DRAWINGS
 - 2) Excavating, filling, and compacting
 - 3) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Tree Protection, Fence	LF

23. Bid Item ESC-23-001: Tree Protection, Beaver

- a. The measurement for payment for this item will be the actual number of linear feet of tree protection fence placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the



ENGINEER. The unit price will include all of CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, installing, and adjusting all materials, including posts, rails, wire, fabric, concrete, and nails as shown on the DRAWINGS
- 2) Excavating, filling, and compacting
- 3) Furnishing and installing beaver protection, as required
- 4) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Tree Protection, Beaver	LF

24. Bid Item ESC-24-001 Reinforced Rock Berm
 Bid Item ESC-24-002: Reinforced Rock Berm, Culvert

a. The measurement for payment for this item will be the actual number of linear feet of reinforced rock berm placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Excavating and removing material
- 2) Providing and placing crushed rock and wire mesh
- 3) Removing reinforced rock berm, including haul off and disposal, upon approval
- 4) Restoring area to pre-project or final grades and conditions
- 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payments will be based on units completed and accepted.

Bid Item	Pay Unit
Reinforced Rock Berm	LF
Reinforced Rock Berm, Culvert	LF

C. RR – REMOVE, RELOCATE, AND ABANDON

1. Bid Item RR-01-001: Abandon Manhole
 Bid Item RR-01-002: Abandon Manhole, Fill with Approved Material
 Bid Item RR-01-003: Abandon Pipe
 Bid Item RR-01-004: Abandon Pipe, Fill with Approved Material

a. The measurement for payment of this item will be per each abandon manhole or linear foot of pipe in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:



- 1) Excavating, backfilling, and compacting
- 2) Filling manhole, inlet or pipe with specified material
- 3) Installing bulkheads
- 4) Removing manhole barrel sections, cones or tops
- 5) Salvaging cones, tops, frames, grates, rings, and covers when directed by the ENGINEER and storing on the PROJECT site at a location approved by the ENGINEER
- 6) Loading salvaged materials for transport by others
- 7) Removing and disposing of debris
- 8) Providing all other related work and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Abandon Manhole	EA
Abandon Manhole, Fill with Approved Material	EA
Abandon Pipe	LF
Abandon Pipe, Fill with Approved Material	LF

2. Bid Item RR-02-001: Relocate Sanitary Sewer
 Bid Item RR-02-002: Relocate Telephone / Cable / Electric / Similar
 Bid Item RR-02-003: Relocate Waterline

a. The measurement for payment of this item will be per actual number of linear feet of utility relocation in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Excavating, exposing, and protecting all existing utilities in the PROJECT limits
- 2) Furnishing, transporting, and installing jointing materials, fittings, and related items as shown on DRAWINGS
- 3) Excavating, including exploratory excavation
- 4) Bedding and backfill, including furnishing, transporting, placing material, and compacting
- 5) Final testing as shown on DRAWINGS
- 6) Providing all other related work and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Relocate Sanitary Sewer	LF
Relocate Telephone / Cable / Electric / Similar	LF
Relocate Waterline	LF



3. Bid Item RR-03-001: Relocate Water Service

- a. The measurement for payment for this item will be on a per each basis for the actual number of water services relocated in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by ENGINEER. The unit price will include all of CONTRACTOR's costs. This BID item includes:
- 1) Coordinating with property owner and local governing agency
 - 2) Locating and protecting service line and other utilities
 - 3) Excavating, backfilling and compacting
 - 4) Supporting trenches, shoring, or sloping trench walls back if shoring is not used
 - 5) Furnishing and placing required pipe bedding and backfill materials
 - 6) Tapping or connecting to pipe, meters and structures
 - 7) Furnishing, transporting, and installing all new pipe, valves, tubing, fittings or items not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS
 - 8) Removing and re-installing meters and meter pits as necessary
 - 9) Removing and disposing all existing pipe, tubing, fittings, and excess materials
 - 10) Providing and maintaining a temporary all weather surface over trenches within City right-of- way until road reconstruction is complete; and removing and disposing all materials used for temporary all weather surface
 - 11) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Relocate Water Service	EA

4. Bid Item RR-04-001 to RR-04-006: Relocate Tree

- a. The measurement for payment for this item will be per each relocated tree in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
- 1) Removing and relocating tree
 - 2) Excavating and backfilling, as necessary
 - 3) Furnishing amendments and preparing the soil
 - 4) Watering during construction period and maintenance periods, as specified
 - 5) Mulching
 - 6) Staking and guying as shown on DRAWINGS
 - 7) Providing all other related and necessary labor, equipment, and materials to complete the WORK



- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Relocate Tree	EA

3. Bid Item RR-05-001: Remove and Reset Fence

- a. The measurement for payment for this item will be the actual number of linear feet of fence removed and reset in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Removing existing fence
- 2) Storing and protecting existing fence materials
- 3) Excavating, backfilling, and compacting
- 4) Removing, hauling, and disposing of structures and obstructions
- 5) Replacing all damaged materials with new materials, as required, including posts, rails, wire, fabric, concrete, and nails
- 6) Restoring area, as required
- 7) Providing all other related and necessary labor, equipment, and materials to complete the WORK

- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Remove and Reset Fence	LF

4. Bid Item RR-06-001: Remove Structures and Obstructions

- Bid Item RR-06-002: Remove Abandoned Utility
- Bid Item RR-06-003: Remove Asphalt Pavement
- Bid Item RR-06-004: Remove Concrete Pavement
- Bid Item RR-06-005: Remove Concrete Structure
- Bid Item RR-06-006: Remove Curb and Gutter
- Bid Item RR-06-007: Remove Fence
- Bid Item RR-06-008: Remove Guardrail
- Bid Item RR-06-009: Remove Manhole
- Bid Item RR-06-010: Remove Pavement Markings
- Bid Item RR-06-011: Remove Pipe
- Bid Item RR-06-012: Remove Sediment from Structure / Pipe / Similar
- Bid Item RR-06-013: Remove Asphalt Sidewalk / Trail
- Bid Item RR-06-014: Remove Concrete Sidewalk / Trail
- Bid Item RR-06-015: Remove Sign
- Bid Item RR-06-016: Remove Signal / Pedestal Poles
- Bid Item RR-06-017: Remove Slope and Ditch Paving
- Bid Item RR-06-018: Remove Tree
- Bid Item RR-06-019: Remove Inlet

- a. The measurement for payment for this item will be lump sum, per each, linear feet, square yard, or cubic yard based on BID item and in



accordance with the DRAWINGS and SPECIFICATIONS. No separate measurement for payment will be made for any labor, equipment, and materials required for this item. The unit price will include all of the CONTRACTOR's costs, which are not specifically measured and paid for under other BID items. This BID item includes, but is not limited to:

- 1) Removing, hauling, and disposing of structures and obstructions including, but not limited to, existing pipe, culverts, inlets, concrete, asphalt, and any structures and obstructions that interfere with the WORK
 - 2) Backfilling and compacting after removal of structures and obstructions
 - 3) Moisture conditioning of suitable backfill material
 - 4) Restoring area, as required
 - 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Remove Structures and Obstructions	LS
Remove Abandoned Utility	LF
Remove Asphalt Pavement	SY
Remove Concrete Pavement	SY
Remove Concrete Structure	EA
Remove Curb and Gutter	LF
Remove Fence	LF
Remove Guardrail	LF
Remove Manhole	EA
Remove Pavement Markings	LF
Remove Pipe	LF
Remove Sediment from Structure / Pipe / Similar	CY
Remove Asphalt Sidewalk / Trail	SY
Remove Concrete Sidewalk / Trail	SY
Remove Sign	EA
Remove Signal / Pedestal Poles	EA
Remove Slope and Ditch Paving	SY
Remove Tree	EA
Remove Inlet	EA



5. Bid Item RR-07-001 to RR-07-004: Remove and Replace Waterline

a. The measurement for payment for this item will be on a per linear foot basis for the actual linear feet of water pipe removed and replaced for water line relocations measured horizontally along the ground surface between the relocation limits in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by ENGINEER. The unit price will include all of CONTRACTOR's costs. This BID item includes:

- 1) Coordinating with property owners and utility companies
- 2) Locating, potholing and protecting service line and other utilities
- 3) Excavating, backfilling and compacting
- 4) Supporting trenches, shoring, or sloping trench walls back if shoring is not used
- 5) Furnishing and placing required pipe bedding and backfill materials
- 6) Removing and properly disposing all removed and excess materials; including asbestos cement pipe
- 7) Furnishing, transporting, and installing all new pipe and fittings or items not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS
- 8) Pressure testing and cleaning new pipe segments
- 9) Providing and making connections to asbestos cement pipe
- 10) Providing and maintaining a temporary all weather surface over trenches within City right-of- way until road reconstruction is complete; and removing and disposing all materials used for temporary all weather surface
- 11) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Remove and Replace Waterline	LF

6. Bid Item RR-08-001: Remove, Store, and Reset Sign

a. The measurement for payment for this item will be per each sign in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Removing existing signage such that signage and associated mounting materials are in as-found condition
- 2) Storing and protecting existing signage and associated mounting materials
- 3) Installing removed materials and furnishing new materials, as required, including posts, bolts and nuts, and signage



- 4) Providing all other related and necessary labor, equipment, and materials required to complete the WORK
- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Remove, Store, and Reset Sign	EA

D. GG - GEOTEXTILES AND GEOGRID

1. Bid Item GG-01-001: Geogrid

- a. The measurement for payment for this item will be the actual number of square yards of geogrid placed measured along the exposed slope (length x width), but will not include the material buried in the anchor trenches or required lapping of the geogrid, in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Excavating and subgrade preparation, as required
 - 1) Furnishing and installing all materials, including the geogrid and anchors
 - 2) Placing the geogrid per manufacturer's specifications
 - 3) Replacing as directed by the ENGINEER
 - 4) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Geogrid	SY

2. Bid Item GG-02-001 to GG-02-002: Geotextile

- a. The measurement for payment for this item will be the actual number of square yards of geotextile placed measured along the exposed slope (length x width), but will not include the material buried in the anchor trenches or required lapping of the geotextile, in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Excavating and preparing subgrade
 - 2) Furnishing and installing all materials, including the geotextile, threading, anchors, and backfill as shown in the DRAWINGS
 - 3) Placing the geotextile per manufacturer's specifications
 - 4) Replacing as directed by the ENGINEER



- 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Geotextile	SY

E. ESP - EARTHWORK AND SUBGRADE PREPARATION

1. Bid Item ESP-01-001: Clay Liner

- a. The measurement for payment for this item will be the actual number of cubic yards of clay liner installed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. No measurement of this item will be made unless changes to the CONTRACT DOCUMENTS are made, in which case the ENGINEER will perform measurement of the modified volume. The quantity is based on the neat lines shown on the DRAWINGS and does not account for shrinkage or swell, and does not include structural excavation or pre-excavation required to install other BID items. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Locating, supplying, and transporting approved material
- 2) Stockpiling with BMPs
- 3) Hauling, placing, and compacting clay material
- 4) Reconditioning material, as necessary, to meet moisture-density requirements
- 5) Providing all other related and necessary labor, equipment, and materials required to complete the WORK

- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Clay Liner	CY

2. Bid Item ESP-02-001: Earthwork, Excavation, and Fill On Site
 Bid Item ESP-02-002: Earthwork, Excavation, and Haul Off Site

- a. The measurement for payment for this item will be the actual number of cubic yards excavated and used for fill or hauled from the site, measured and computed by the average end area method or grid method (difference between existing and finished grade) in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. No measurement of this item will be made unless changes to the CONTRACT DOCUMENTS are made, in which case the ENGINEER will perform measurement of the modified volume. The quantity is based on the neat lines shown on the DRAWINGS and does not account for shrinkage or swell, and does not include structural excavation or pre-excavation required to install other BID items. The unit price will include all of the



CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Excavating, transporting, stockpiling with BMPs, and hauling excavated material to fill areas within PROJECT, or properly disposing off site
- 2) Placing, reworking, and compacting fill material
- 3) Cross hauling material
- 4) Moistening, drying, and reconditioning material, as necessary, to meet moisture-density requirements
- 5) Surface roughening and terracing BMPs as shown on the DRAWINGS
- 6) Removing and hauling deleterious materials
- 7) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Earthwork, Excavation, and Fill On Site	CY
Earthwork, Excavation, and Haul Off Site	CY

3. Bid Item ESP-03-001: Earthwork, Imported Fill

a. The measurement for payment for this item will be the actual number of cubic yards of fill to be imported from an offsite source to be properly stockpiled and placed along the finished lines and grades in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. Measurement of this item will be completed by the ENGINEER and will measured and computed by the average end area method or grid method (difference between existing and finished grade) in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Locating, supplying, and transporting of approved material
- 2) Stockpiling with BMPs
- 3) Hauling, placing, and compacting fill material
- 4) Reconditioning material, as necessary, to meet moisture-density requirements
- 5) Surface roughening and terracing BMPs as shown on the DRAWINGS
- 6) Providing all other related and necessary labor, equipment, and materials required to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Earthwork, Imported Fill	CY



4. Bid Item ESP-04-001: Export of Excess Material

a. The measurement for payment for this item will be based on the actual number of cubic yards of earthen material exported off site. Excess material that is not placed on site will be hauled off site. Excess material to be exported off site will not be measured, but will be paid for on a per unit basis for WORK required to remove excess materials from the site. The cost for disposing of any excess and deleterious material will be included in the cubic yard bid price. No measurement for payment will be made for the export of any excess material that is associated with and intrinsic to any other BID item. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Loading and hauling off site excess and deleterious materials to a proper disposal site determined by the CONTRACTOR
- 2) Cross hauling material
- 3) Protecting onsite stockpiles from erosion
- 4) Placing, reworking, and compacting fill material, if required, by the disposal site
- 5) Reconditioning material at disposal site, if required, to meet moisture-density requirements
- 6) Placing BMPs, fencing, or other requirements at the disposal site
- 7) Obtaining all associated permits and approvals
- 8) Assuming costs for fuel, disposal at a landfill or disposal site, fee(s), and all other associated costs
- 9) Following all necessary safety measures
- 10) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Export of Excess Material	CY

5. Bid Item ESP-05-001: Excavation, Muck, Replace with Approved Material

a. The measurement for payment for this item will be the actual number of cubic yards of material removed beyond what is required for the construction of the improvements in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. Measurement will be based upon actual field measurements and calculated volumes (no allowance for shrinkage or swell). The unit price will include all of the CONTRACTOR's costs. This BID item will be only at the direction of the ENGINEER. This BID item includes, but is not limited to:

- 1) Excavating, hauling, and disposing material off site
- 2) Replacing with approved material
- 3) Placing approved geotextile
- 4) Providing all other related and necessary labor, equipment, and materials to complete the WORK



- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Excavation, Muck, Replace with Approved Material	CY

6. Bid Item ESP-06-001: Excavation, Rock, Fill On Site
 Bid Item ESP-06-002: Excavation, Rock, Haul Off Site
 Bid Item ESP-06-003: Excavation, Rock, Stockpile Only
 Bid Item ESP-06-004: Excavation, Rock, Stockpile, and Reuse

- a. The measurement for payment for this item will be the actual number of cubic yards of material removed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The quantity is based on the neat lines shown on the DRAWINGS and SPECIFICATIONS, and does not account for shrinkage or swell. The unit price will include all of the CONTRACTOR'S costs. This BID item will be only at the direction of the ENGINEER. This BID item includes, but is not limited to:

- 1) Excavating
- 2) Properly disposing of rock
- 3) Stockpiling material with stockpile management BMPs and providing all related safety measures
- 4) Reuse of rock as directed by the ENGINEER
- 5) Hauling, placing, and compacting fill material
- 6) Reconditioning material, as necessary, to meet moisture-density requirements
- 7) Providing all other related and necessary labor, equipment, and materials to complete the WORK

- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Excavation, Rock, Fill On Site	CY
Excavation, Rock, Haul Off Site	CY
Excavation, Stockpile Only	CY
Excavation, Rock, Stockpile and Reuse	CY

7. Bid Item ESP-07-001: Topsoil, Excavate, Stockpile, and Replace
 Bid Item ESP-07-002: Topsoil - Wetland, Excavate, Stockpile, and Replace
 Bid Item ESP-07-003: Topsoil - Wetland, Excavate, Haul Off Site

- a. The measurement for payment for this item will be the actual number of cubic yards of topsoil excavated, properly stockpiled, and replaced in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. No measurement of this item will be made unless changes to the CONTRACT DOCUMENTS are made, in which case the ENGINEER will perform measurement of the modified volume. The quantity is based on the neat lines shown



on the DRAWINGS and SPECIFICATIONS, and does not account for shrinkage or swell. No additional payment will be made for areas disturbed outside of construction limits or areas within construction limits that are not identified on the DRAWINGS and SPECIFICATIONS to be disturbed, unless approved by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Excavating topsoil and vegetation to required depths
 - 2) Stockpiling and segregating upland and wetland soil in an upland area
 - 3) Removing and properly disposing of wetland topsoil
 - 4) Protecting stockpiles from erosion
 - 5) Preparing subgrade
 - 6) Replacing and moistening of topsoil in the designated areas to required depths
 - 7) Providing all other related and necessary labor, equipment, and materials required to complete the WORK
- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Topsoil, Excavate, Stockpile, and Replace	CY
Topsoil - Wetland, Excavate, Stockpile, and Replace	CY
Topsoil - Wetland, Excavate, Haul Off Site	CY

8. Bid Item ESP-08-001: Topsoil, Imported, Upland
 Bid Item ESP-08-002: Topsoil, Imported, Wetland

a. The measurement for payment for this item will be the actual number of cubic yards of imported topsoil in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. No measurement of this item will be made unless changes to the CONTRACT DOCUMENTS are made, in which case the ENGINEER will perform measurement of the modified volume. The quantity is based on the neat lines shown on the DRAWINGS and SPECIFICATIONS, and does not account for shrinkage or swell. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing approved material, transporting, and stockpiling topsoil
- 2) Testing
- 3) Distributing, placing, and compacting as shown on the DRAWINGS
- 4) Reconditioning material, as necessary, to meet moisture-density requirements
- 5) Providing all other related and necessary labor, equipment, and materials required to complete the WORK



- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Topsoil, Imported, Upland	CY
Topsoil, Imported, Wetland	CY

F. RW – ROCKWORK

- 1. Bid Item RW-01-001: Aggregate Base Course

- a. The measurement for payment for this item will be the actual number of cubic yards of aggregate base course placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, transporting, mixing, and placing all aggregate
- 2) Excavating, preparing subgrade, backfilling, and compacting to the lines and grades shown on the DRAWINGS
- 3) Removing any debris, disposing unsuitable material, and transporting, stockpiling, and placing suitable excess material in fill areas within the PROJECT
- 4) Providing all other related and necessary labor, equipment, and materials to complete the WORK

- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Aggregate Base Course	CY

- 2. Bid Item RW-02-001 to RW-02-002: Bedding, Granular

- a. The measurement for payment for this item will be the actual number of cubic yards of bedding placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, transporting, mixing, and placing all bedding material
- 2) Excavating, placing, and compacting volume replaced by bedding material
- 3) Excavating, backfilling, and compacting.
- 4) Providing all other related and necessary labor, equipment, and materials to complete the WORK

- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Bedding, Granular	CY



3. Bid Item RW-03-001 to RW-03-006: Boulder Edging, Single Row, Grouted

a. The measurement for payment for this item will be the actual number of linear feet of boulders placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Excavating, backfilling, and compacting Preparing and stabilizing subgrade
- 2) Furnishing, handling, stockpiling, and placing boulders
- 3) Disposing rejected boulders
- 4) Placing riprap and bedding, as required
- 5) Placing, vibrating, finishing, and curing grout, including providing fibermesh and color in the grout, as required
- 6) Furnishing and installing weep drains
- 7) Furnishing and placing steel reinforcement
- 8) Washing excess grout from all boulders prior to the grout curing Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Boulder Edging, Single Row, Grouted	LF

4. Bid Item RW-04-001 to RW-04-006: Boulder Edging, Single Row, UngROUTED

a. The measurement for payment for this item will be the actual number of linear feet of boulders placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Excavating, backfilling, and compacting Preparing and stabilizing subgrade
- 2) Furnishing, handling, stockpiling, and placing boulders
- 3) Disposing rejected boulders
- 4) Placing riprap and bedding, as required
- 5) Furnishing and installing weep drains
- 6) Furnishing and placing steel reinforcement Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Boulder Edging, Single Row, UngROUTED	LF



5. Bid Item RW-05-001 to RW-05-030: Boulder Wall, Grouted

- a. The measurement for payment for this item will be the actual number of linear feet of boulder wall placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Excavating, backfilling, and compacting Preparing and stabilizing subgrade
 - 2) Furnishing, handling, stockpiling, and placing boulders, including foundation boulders
 - 3) Disposing rejected boulders
 - 4) Placing riprap and bedding, as required
 - 5) Placing, vibrating, finishing, and curing grout, including providing fibermesh and color in the grout, as required
 - 6) Furnishing and installing weep drains
 - 7) Furnishing and placing steel reinforcement
 - 8) Washing excess grout from all boulders prior to the grout curing Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Boulder Wall	LF

6. Bid Item RW-06-001 to RW-06-006: Boulder, Feature

- a. The measurement for payment for this item will be per each feature boulder placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Excavating, backfilling, and compacting Preparing and stabilizing subgrade
 - 2) Furnishing, handling, stockpiling, and placing boulders
 - 3) Disposing rejected boulders Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Boulder, Feature	EA

7. Bid Item RW-07-001 to RW-07-006: Boulders, Grouted

- a. The measurement for payment for this item will be the actual number of square yards of boulders placed in accordance with the



DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. No separate measurement for payment will be made for any labor, equipment, and materials (including grout) required for this item. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Excavating, backfilling, and compacting Preparing and stabilizing subgrade
- 2) Furnishing, handling, stockpiling, and placing boulders, including foundation boulders
- 3) Disposing rejected boulders
- 4) Placing riprap and bedding as shown on the DRAWINGS
- 5) Placing, vibrating, finishing, and curing grout,
- 6) Providing fibermesh and color in the grout as shown on the DRAWINGS
- 7) Furnishing and installing weep drains
- 8) Furnishing and placing steel reinforcement
- 9) Washing excess grout from all boulders prior to the grout curing Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on the units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Boulders, Grouted	SY

8. Bid Item RW-08-001 to RW-08-006: Boulders, Ungroued

a. The measurement for payment for this item will be the actual number of square yards of boulders placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. No separate measurement for payment will be made for any labor, equipment, and materials (including grout) required for this item. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Excavating, backfilling, and compacting Preparing and stabilizing subgrade
- 2) Furnishing, handling, stockpiling, and placing boulders, including foundation boulders
- 3) Disposing rejected boulders
- 4) Placing riprap and bedding, as required
- 5) Furnishing and installing weep drains
- 6) Furnishing and placing steel reinforcement
- 7) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on the units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Boulders, Ungroued	SY



9. Bid Item RW-09-001: Filter Material, Granular

- a. The measurement for payment for this item will be the actual number of cubic yards of filter material placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Furnishing, transporting, and placing all filter material
 - 2) Furnishing, transporting, and placing geotextile below filter material
 - 3) Excavating, preparing subgrade, backfilling, and compacting to the lines and final grades
 - 4) Removing any debris, disposing unsuitable materials, and transporting, stockpiling, or hauling suitable excess material off site Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Filter Material, Granular	CY

10. Bid Item RW-010-001 to RW-010-005: Riprap with Bedding

- a. The measurement for payment for this item will be the actual number of cubic yards of riprap placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. No measurement of this item will be made unless changes to the CONTRACT DOCUMENTS are made, in which case the ENGINEER will perform measurement of the modified volume. Measurement does not include the thickness of the bedding. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Furnishing, transporting, and placing all riprap and bedding
 - 2) Excavating, backfilling, and compacting/plating
 - 3) Removing and disposing excavated material and debris
 - 4) Providing compacted fill required to bury riprap
 - 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Riprap with Bedding	CY

11. Bid Item RW-11-001 to RW-11-005: Riprap, Void-Filled

- a. The measurement for payment for this item will be the actual number of cubic yards of void-filled riprap with bedding placed in accordance with the DRAWINGS and SPECIFICATIONS or as



otherwise directed by the ENGINEER. No measurement of this item will be made unless changes to the CONTRACT DOCUMENTS are made, in which case the ENGINEER will perform measurement of the modified volume. Measurement does not include the thickness of the bedding. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, transporting, mixing, and placing all riprap, and material for filling voids
- 2) Excavating, backfilling, and compacting/plating
- 3) Removing and disposing excavated material and debris
- 4) Providing compacted fill required to mix with and bury riprap
- 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Riprap, Void-Filled	CY

12. Bid Item RW-12-001 to RW-12-005: Soil Riprap

a. The measurement for payment for this item will be the actual number of cubic yards of soil riprap placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. No measurement of this item will be made unless changes to the CONTRACT DOCUMENTS are made, in which case the ENGINEER will perform measurement of the modified volume. Measurement does not include the thickness of the bedding. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, transporting, and placing all riprap and bedding
- 2) Excavating, backfilling, and compacting/plating
- 3) Removing and disposing excavated material and debris
- 4) Providing approved material required to mix with riprap or wash with water into riprap
- 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Soil Riprap	CY

G. BP - BANK PROTECTION

1. Bid Items BP-01-001 to BP-01-006: Bank Protection

a. The measurement for payment for this item will be the actual number of linear feet of bank protection placed in accordance with the DRAWINGS and SPECIFICATIONS, or as otherwise directed by the ENGINEER. No measurement of this item will be made unless



changes to the CONTRACT DOCUMENTS are made, in which case the ENGINEER will perform measurement of the modified quantities. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Excavating, preparing subgrade (including bedding), backfilling, and burying riprap to the lines and grades as shown on the DRAWINGS and SPECIFICATIONS
- 2) Removing debris, disposing of unsuitable material, transporting, stockpiling, and placing suitable excess material in fill areas within the PROJECT or off site
- 3) Furnishing, transporting, installing riprap, and filling voids with topsoil or other approved material
- 4) Furnishing and installing erosion control blanket and vegetation as shown on DRAWINGS
- 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Bank Protection	LF

2. Bid Item BP-02-001: Soil Lift, Wrapped

a. The measurement for payment for this item will be per linear foot of lift for each soil measured along the exposed face, but will not include material buried below grade placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, transporting, handling, and placing all soil wraps and geotextile
- 2) Excavating, backfilling, compacting and placing topsoil
- 3) Preparing and stabilizing foundation
- 4) Removing and disposing excavated material and debris
- 5) Placing geotextile
- 6) Placing seed
- 7) Placing compacted soil backfill within soil wraps
- 8) Staking geotextile with wood stakes
- 9) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Soil Lift, Wrapped	LF



H. SS – STORM SEWER SYSTEM

1. Bid Item SS-01-001 to SS-01-05: Concrete Box Culvert, Pre-Cast

a. The measurement for payment for this item will be the actual number of linear feet of box culvert placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Locating and protecting all existing utilities in and along the length of the culvert
- 2) Excavating, backfilling, including the furnishing, transporting, and placing material and compacting
- 3) Supporting trenches, shoring, or laying slopes back if shoring is not used
- 4) Furnishing and compacting all materials required for a stable subbase, specific drainage material, structural backfill, and other backfill material
- 5) Constructing the specific bedding, including the furnishing, placing, and compacting of sand, gravel, and rock
- 6) Furnishing and installing pre-cast box culvert sections
- 7) Furnishing and placing reinforcing steel and waterstops
- 8) Finishing and edging
- 9) Furnishing and placing joint sealant and gaskets
- 10) Furnishing and installing underdrain pipe and fabric when shown or called for on DRAWINGS
- 11) Furnishing and installing protective coatings or wrapping pipe encasements per manufacturer's specifications when shown or called for on the DRAWINGS
- 12) Furnishing and installing tracer wire or location tape.
- 13) Furnishing, transporting, and placing flowfill material
- 14) Furnishing and installing temporary plugs and sand bags
- 15) Providing for storm sewer connections
- 16) Protecting aboveground and underground utilities and service connections
- 17) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Concrete Box Culvert, Pre-Cast	LF

2. Bid Item SS-02-001 to SS-02-007: Flared End Section, Reinforced Concrete Pipe (RCP)

a. The measurement for payment for this item will be per each flared end section placed in accordance with the DRAWINGS and SPECIFICATIONS, or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR'S COSTS. This BID item includes, but is not limited to:



- 1) Preparing / stabilizing subgrade foundation
- 2) Furnishing, transporting, and installing precast flared end sections
- 3) Furnishing, placing, and curing concrete and reinforcing steel for toe walls
- 4) Supporting trenches, shoring, or laying slopes back if shoring is not used
- 5) Connecting end sections to pipe, including tie backs and joint restraints as shown on DRAWINGS
- 6) Furnishing, transporting, and installing jointing materials, including: O-rings, gaskets, bolts, concrete collars, connecting bands, and other miscellaneous items
- 7) Excavating, including exploratory excavation
- 8) Backfilling, including furnishing, transporting, and placing bedding and backfill materials, and compacting
- 9) Furnishing, transporting, and placing flowfill material as shown on DRAWINGS
- 10) Removing and disposing debris, excess excavated materials, and damaged materials
- 11) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Flared End Section, Reinforced Concrete Pipe (RCP)	EA

3. Bid Item SS-03-001 to SS-03-040: Manhole

- a. The measurement for payment for this item will be per each manhole placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Furnishing, transporting, and installing all materials, including sheeting and/or bracing, bedding, concrete, reinforcing steel, precast bases, barrels, cones, and/or tops, grade rings, mortar, joint sealant, grout, manhole steps, ring and cover, and watertight manhole frame and bolted lid, where required
 - 2) Constructing and shaping the base invert, including all pipe incorporated within the manhole
 - 3) Constructing required stub-outs and connections, including pipe and plugs
 - 4) Supporting trenches, shoring, or laying slopes back if shoring is not used
 - 5) Placing ramneck between barrel sections
 - 6) Furnishing, transporting, and installing concrete collars, including any required steel reinforcement Furnishing, transporting, and placing flowfill material
 - 7) Interior and exterior water proofing
 - 8) Excavating, backfilling, and compacting, including imported backfill material if no suitable onsite material is available



- 9) Removing and disposing debris, excess excavated materials, and damaged materials
- 10) Providing all other related work and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Manhole	EA

4. Bid Item SS-04-001: Manhole, Adjust Rim

a. The measurement for payment for this item will be per vertical foot of manhole adjustment completed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, transporting, and installing all materials, including sheeting and/or bracing, bedding, concrete, reinforcing steel, precast bases, barrels, cones, and/or tops, grade rings, mortar, joint sealant, grout, manhole steps, ring and cover, and watertight manhole frame and bolted lid where required
- 2) Sawcutting manhole as required for adjustment
- 3) Constructing required stub-outs and connections, including pipe and plugs
- 4) Placing ramneck between barrel sections
- 5) Furnishing, transporting, and installing concrete collars, including any required steel reinforcement
- 6) Furnishing, transporting, and placing flowfill material as required
- 7) Interior and exterior water proofing as shown on DRAWINGS
- 8) Excavating, backfilling, and compacting, including imported backfill material if no suitable onsite material is available
- 9) Disposing of any materials generated from the manhole adjustment
- 10) Removing pavement, base course, subbase material, sod, and other surfacing material that is not paid for under another section of these SPECIFICATIONS
- 11) Providing all other related work and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Manhole, Adjust Rim	VF

5. Bid Item SS-05-001 to SS-05-011: Pipe Plug

a. The measurement for payment for this item will be per each pipe plug placed in accordance with the DRAWINGS and SPECIFICATIONS, or as otherwise directed by the ENGINEER.



The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing and transporting pipe plug
- 2) Excavating
- 3) Cutting existing pipe, as required
- 4) Removing and disposing discarded pipe
- 5) Furnishing and placing seal joints and gaskets
- 6) Placing plug to provide a water tight seal
- 7) Furnishing and placing concrete collar as shown on DRAWINGS
- 8) Backfilling and compacting
- 9) Removing and replacing surfacing materials, as required
- 10) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Pipe Plug	EA

6. Bid Item SS-06-001 to SS-06-085: Reinforced Concrete Pipe (RCP)

a. The measurement for payment for this item will be the actual number of linear feet of pipe installed, complete in place, measured along the center line of the pipe from the inside face of one manhole to the inside face of another or to a given station, or from one given station to another given station. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Locating and protecting all existing utilities in and along the pipe length
- 2) Furnishing, transporting, and installing all pipes, special fittings, jointing materials, and materials not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS
- 3) Adjusting location of existing small utilities and valves
- 4) Tapping and/or connecting to pipes or structures
- 5) Furnishing, transporting, and placing flowfill material
- 6) Conducting exploratory excavation and potholing
- 7) Constructing the specific bedding, including the furnishing, placing, and compacting of sand, gravel, and rock
- 8) Furnishing and installing protective coatings or wrapping pipe encasements per manufacturer's specifications
- 9) Excavating, backfilling, including furnishing, transporting, and placing material and compacting
- 10) Furnishing and installing tracer wire or location tape
- 11) Supporting trenches, shoring, or laying slopes back if shoring is not used
- 12) Protecting aboveground and underground utilities and service connections



- 13) Disposing of debris, pipe, excess excavated materials, and damaged materials
- 14) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Reinforced Concrete Pipe (RCP)	LF

7. Bid Item SS-07-001 to SS-07-055: Storm Inlet

a. The measurement for payment for this item will be per each storm inlet placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Excavating, backfilling, and compacting; including imported backfill material if no suitable onsite material is available
- 2) Supporting trenches, shoring, or sloping trench walls back if shoring is not used
- 3) Protecting adjacent structures and property
- 4) Furnishing, transporting, and installing all materials, including precast structures, concrete, reinforcing steel, mortar and grout, grate, frame and curb box or open throat box, flowable fill, and any necessary connections
- 5) Constructing and shaping the base invert including finishing
- 6) Constructing intermediate wall(s) in all Type R inlets greater than fifteen (15) feet long
- 7) Constructing required stub-outs and making connections including pipe and plugs
- 8) Disposing of material, excavating, backfilling, and compacting, including imported backfill material if no suitable onsite material is available
- 9) Removing and replacing pavement, base course, subbase material, sod, and other surfacing material outside of the prescribed trench width that is not paid for under another BID ITEM
- 10) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Storm Inlet	EA

8. Bid Item SS-08-001: Underdrain Pipe, Common Trench
Bid Item SS-08-002: Underdrain Pipe, Shared Trench

a. The measurement for payment for this item will be the actual number of linear feet of underdrain pipe placed in accordance with the



DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Trenching, backfilling and compacting as shown on DRAWINGS
- 2) Placing geotextile fabric
- 3) Furnishing, transporting, and placing all rock, pipe, clean-outs, and fittings
- 4) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Underdrain Pipe, Common Trench	LF
Underdrain Pipe, Shared Trench	LF

I. SC – STRUCTURES AND MISCELLANEOUS CONCRETE

1. Bid Item SC-01-001 to SC-01-05: Concrete Box Culvert, Cast-In-Place

a. The measurement for payment for this item will be the actual number of cubic yards of concrete placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Locating and protecting all existing utilities in and along culvert length
- 2) Excavating, backfilling, including furnishing, transporting, and placing material and compacting
- 3) Furnishing, forming, and placing concrete for the box culverts
- 4) Finishing and edging
- 5) Furnishing, transporting, and installing all reinforcing steel, waterstops, seal joints, gaskets, and materials not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS
- 6) Constructing the specific bedding, including the furnishing placing, and compacting of sand, gravel, and rock
- 7) Furnishing, transporting, and placing flowfill material
- 8) Furnishing and installing temporary plugs and sand bags
- 9) Adjusting location of existing small utilities and valves
- 10) Tapping and/or connecting to pipes or structures
- 11) Furnishing and installing tracer wire or location tape
- 12) Protecting aboveground and underground utilities and service connections
- 13) Supporting trenches, shoring, or laying slopes back if shoring is not used
- 14) Disposing of debris, pipe, excess excavated materials, and damaged materials



15) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Concrete Box Culvert, Cast-In-Place	CY

2. Bid Item SC-02-001 to SC-02-003: Bollard

a. The measurement for payment for this item will be per each bollard placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Excavating and disposing of material
- 2) Backfilling and compacting
- 3) Furnishing, transporting, and placing bollard and hardware
- 4) Furnishing and placing concrete
- 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Bollard	EA

3. Bid Item SC-03-001: Concrete Coating

a. The measurement for payment for this item will be the actual number of square feet of concrete coating placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Treating, patching cleaning and preparing concrete surfaces prior to coating
- 2) Furnishing and applying the coating
- 3) Providing all other related and necessary labor, equipment, and materials required to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Concrete Coating	SF

4. Bid Item SC-04-001 to SC-04-005: Concrete Curb and Gutter with Pan

a. The measurement for payment for this item will be the actual number of linear feet of concrete curb and gutter with pan placed as measured along the flow line in accordance with the DRAWINGS



and SPECIFICATIONS or as otherwise directed by the ENGINEER. No measurement for payment will be made for curb and gutter replaced outside of that specified on the DRAWINGS and SPECIFICATIONS or for driveway radius returns, vehicle access ramps, and pedestrian ramps. No measurement for payment will be made for replacement of materials damaged by the CONTRACTOR's operations. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Sawcutting, removing, and disposing all damaged and broken concrete, gravel, or other surface debris
- 2) Disposing of material, excavating, backfilling, and compacting, including imported backfill material if no suitable onsite material is available
- 3) Furnishing, forming, and placing concrete
- 4) Furnishing and applying curing compounds
- 5) Furnishing colored concrete as shown on DRAWINGS
- 6) Furnishing fiber mesh reinforcement as shown on DRAWINGS
- 7) Finishing and edging concrete surfaces
- 8) Sawing or tooling joints
- 9) Furnishing and installing steel reinforcement as shown on DRAWINGS
- 10) Furnishing and installing cold joint material and dowels
- 11) Providing hot and cold protection
- 12) Furnishing and compacting all material required for a stable subbase, including bedding as shown on DRAWINGS
- 13) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Concrete Curb and Gutter with Pan	LF

5. Bid Item SC-05-001 to SC-05-003: Concrete Low Flow Channel

a. The measurement for payment for this item will be the actual number of square feet of concrete low flow channel placed as measured along the flow line in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. No measurement for payment will be made for replacement of materials damaged by the CONTRACTOR's operations. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Sawcutting, removing, and disposing all damaged and broken concrete, gravel, or other surface debris
- 2) Disposing of material, excavating, backfilling, and compacting, including imported backfill material if no suitable onsite material is available



- 3) Furnishing, forming, and placing concrete
- 4) Furnishing and applying curing compounds
- 5) Furnishing colored concrete as shown on DRAWINGS
- 6) Furnishing fiber mesh reinforcement as shown on DRAWINGS
- 7) Finishing and edging concrete surfaces
- 8) Sawing or tooling joints
- 9) Furnishing and installing steel reinforcement as shown on DRAWINGS
- 10) Furnishing and installing cold joint material and dowels
- 11) Providing hot and cold protection
- 12) Furnishing and compacting all material required for a stable subbase, including bedding, if required
- 13) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Concrete Low Flow Channel	SF

6. Bid Item SC-06-001 to SC-06-003: Concrete Pan

a. The measurement for payment for this item will be the actual number of linear feet of concrete placed as measured along the flow line in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. No measurement for payment will be made for replacement of materials damaged by the CONTRACTOR's operations. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Sawcutting, removing, and disposing all damaged and broken concrete, gravel, or other surface debris
- 2) Disposing of material, excavating, backfilling, and compacting, including imported backfill material if no suitable onsite material is available
- 3) Furnishing, forming, and placing concrete
- 4) Furnishing and applying curing compounds
- 5) Furnishing colored concrete as shown on DRAWINGS
- 6) Furnishing fiber mesh reinforcement as shown on DRAWINGS
- 7) Finishing and edging concrete surfaces
- 8) Sawing or tooling joints
- 9) Furnishing and installing steel reinforcement as shown on DRAWINGS
- 10) Furnishing and installing cold joint material and dowels
- 11) Providing hot and cold protection
- 12) Furnishing and compacting all material required for a stable subbase, including bedding, if required
- 13) Providing all other related and necessary labor, equipment, and materials to complete the WORK



- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Concrete Pan	LF

7. Bid Item SC-07-001 to SC-07-006: Reinforced Concrete Pavement

- a. The measurement for payment for this item will be the actual number of square yards of concrete placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Sawcutting, removing, and disposing all damaged and broken concrete, gravel, or other surface debris
- 2) Furnishing, forming and placing concrete, including coloring and fibermesh as shown on DRAWINGS
- 3) Furnishing and installing expansion joints
- 4) Furnishing and applying the curing compounds
- 5) Furnishing and installing steel reinforcement as shown on DRAWINGS
- 6) Furnishing, forming, and placing concrete thickened edge
- 7) Providing hot and cold protection
- 8) Sawcutting control joints, as required
- 9) Finishing and edging the concrete surface
- 10) Furnishing and compacting all material required for a stable subbase, including bedding, if required
- 11) Backfilling and compacting adjacent to trail or structure
- 12) Providing all other related and necessary labor, equipment, and materials to complete the WORK

- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Reinforced Concrete Pavement	SY

8. Bid Item SC-08-001 to SC-08-004: Concrete Sidewalk / Trail

- a. The measurement for payment for this item will be the actual number of square yards of concrete placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Sawcutting, removing, and disposing all damaged and broken concrete, gravel, or other surface debris
- 2) Furnishing, forming and placing concrete, including coloring and fibermesh and materials not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS
- 3) Furnishing and installing expansion joints
- 4) Furnishing and applying the curing compounds



- 5) Furnishing and placing reinforcing steel
 - 6) Furnishing, forming, and placing concrete thickened edge
 - 7) Providing hot and cold protection
 - 8) Sawcutting control joints, as required
 - 9) Finishing and edging the concrete surface
 - 10) Furnishing and compacting all material required for a stable subbase, including bedding, if required
 - 11) Excavating, backfilling and compacting adjacent to trail or structure
 - 12) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Concrete Sidewalk / Trail	SY

9. Bid Item SC-09-001 to SC-09-003: Concrete Flatwork

- a. The measurement for payment for this item will be the actual number of square yards of concrete placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Sawcutting, removing and disposing all damaged and broken concrete, gravel, or other surface debris
- 2) Furnishing, forming and placing concrete, including coloring and fibermesh and materials not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS
- 3) Furnishing and installing expansion joints
- 4) Furnishing and applying the curing compounds
- 5) Furnishing, forming, and placing concrete thickened edge
- 6) Providing hot and cold protection
- 7) Sawcutting control joints, as required
- 8) Finishing and edging the concrete surface
- 9) Furnishing and compacting all material required for a stable subbase, including bedding, if required
- 10) Excavating, backfilling and compacting adjacent to trail or structure
- 11) Providing all other related and necessary labor, equipment, and materials to complete the WORK

- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Concrete Flatwork	SY

10. Bid Item SC-10-001: Concrete Pipe Collar with Rebar

- a. The measurement for payment for this item will be the actual number of cubic yards of concrete with rebar placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the



ENGINEER. No measurement for payment will be made for excavation, drilling, or doweling of reinforcement steel into the concrete. No measurement for payment will be made for replacement of materials damaged by the CONTRACTOR's operations. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, forming, and placing concrete
- 2) Furnishing and applying curing compounds
- 3) Furnishing and placing reinforcing steel
- 4) Placing base course
- 5) Waterstop as shown on the DRAWINGS
- 6) Providing hot and cold protection
- 7) Furnishing, placing, and compacting backfill material
- 8) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Concrete Pipe Collar with Rebar	EA

11. Bid Item SC-11-001 to SC-11-002: Concrete, Cutoff Wall

a. The measurement for payment for this item will be the actual number of cubic yards of concrete placed for a cutoff wall in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. No measurement for payment will be made for excavation, drilling, or doweling of reinforcement steel into the concrete. No measurement for payment will be made for replacement of materials damaged by the CONTRACTOR's operations. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, forming, and placing concrete
- 2) Furnishing and applying curing compounds
- 3) Finishing and edging concrete surfaces
- 4) Sawing or tooling joints
- 5) Furnishing and installing cold joint material
- 6) Furnishing and placing reinforcing steel as shown on the DRAWINGS
- 7) Placing base course
- 8) Providing hot and cold protection
- 9) Furnishing, placing, and compacting backfill material
- 10) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Concrete, Cutoff Wall	CY



12. Bid Item SC-12-001 to SC-12-014: Concrete

a. The measurement for payment for this item will be the actual number of cubic yards of concrete placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. No measurement for payment will be made for removed structural concrete outside of that specified on the DRAWINGS and SPECIFICATIONS or for excavation, drilling, or doweling of reinforcement steel into the concrete. No measurement for payment will be made for replacement of materials damaged by the CONTRACTOR's operations. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, forming and placing concrete, including coloring and fibermesh as shown on the DRAWINGS
- 2) Furnishing and applying curing compounds
- 3) Finishing and edging concrete surfaces
- 4) Sawing or tooling joints
- 5) Furnishing and installing cold joint material
- 6) Furnishing and placing reinforcing steel
- 7) Placing base course
- 8) Providing hot and cold protection
- 9) Furnishing, placing, and compacting backfill material
- 10) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Concrete	CY

13. Bid Item SC-13-001: Controlled Low Strength Material (CLSM) Bid Item SC-13-002: Grout

a. The measurement for payment for this item will be the actual number of cubic yards of controlled low strength material or grout placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, forming, and placing material
- 2) Furnishing and applying curing compounds
- 3) Mixing and placing the grout or controlled low strength material per manufacturer's specifications
- 4) Preparing surface and furnishing and placing reinforcing steel, as necessary
- 5) Furnishing and installing bonding adhesive
- 6) Field testing
- 7) Providing all other related and necessary labor, equipment, and materials to complete the WORK



- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Controlled Low Strength Material (CLSM)	CY
Grout	CY

14. Bid Item SC-14-001 to SC-14-003: Handrail, Steel

- a. The measurement for payment for this item will be the actual number of linear feet of steel handrail placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, measuring, fabricating, welding, blasting, priming, coating, painting, and installing handrail
- 2) Providing hardware necessary to anchor handrail
- 3) Providing all other related and necessary labor, equipment, and materials to complete the WORK

- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Handrail, Steel	LF

15. Bid Item SC-15-001: Retaining Wall, Modular Block
Bid Item SC-15-002: Retaining Wall, Redi - Rock

- a. The measurement for payment for this item will be the actual number of square feet of retaining wall placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Excavating and removing material
- 2) Backfilling and compacting
- 3) Preparing/stabilizing foundation
- 4) Furnishing, handling, stockpiling, geogrid, and placing approved blocks and top caps as shown on the DRAWINGS
- 5) Disposing of rejected materials
- 6) Installing filter fabric, concrete, grout, or rebar as shown on the DRAWINGS
- 7) Placing granular rock backdrain material
- 8) Placing clay soil over granular rock backdrain material
- 9) Providing all other related work and necessary labor equipment, and materials to complete the WORK

- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Retaining Wall, Modular Block	SF
Retaining Wall, Redi – Rock	SF



16. Bid Item SC-16-001: Sheet Pile Cap, Concrete

- a. The measurement for payment for this item will be the actual number of linear feet of sheet pile cap placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Excavating and disposing of the material
 - 2) Furnishing, forming, and placing concrete, including rebar
 - 3) Acquiring, placing, and compacting approved clay material as shown the DRAWINGS
 - 4) Installing gasket material as required
 - 5) Welding, extension, and splicing, as necessary, to install sheet pile cap according to the DRAWINGS and SPECIFICATIONS
 - 6) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Sheet Pile Cap, Concrete	LF

17. Bid Item SC-17-001: Sheet Pile Cap, Steel

- a. The measurement for payment for this item will be the actual number of linear feet of sheet pile cap placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Excavating and disposing of the material
 - 2) Furnishing, transporting, and placing cap
 - 3) Acquiring, placing, and compacting approved clay material as shown on the DRAWINGS
 - 4) Installing gasket material as required
 - 5) Welding, extension, and splicing, as necessary, to install sheet pile cap according to the DRAWINGS and SPECIFICATIONS
 - 6) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Sheet Pile Cap, Steel	LF

18. Bid Item SC-18-001 to SC-18-003: Sheet Pile

- a. The measurement for payment for this item will be the actual number of square feet placed in accordance with the DRAWINGS and



SPECIFICATIONS or as otherwise directed by the ENGINEER. Measurements will be based upon planar square feet (length x width). No payment will be made for sheet pile installed outside the limits of construction shown on the DRAWINGS and SPECIFICATIONS, or for WORK required to repair damage done by the CONTRACTOR's operations. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Excavating and disposing of material
- 2) Supplying, installing, splicing, and cutting sheet piling
- 3) Driving
- 4) Removing and replacing pile damaged during installation
- 5) Removing and disposing in an approved manner any buried obstructions in the proposed alignment of the sheet piling to allow for driving of sheet piling
- 6) Constructing and restoring access roads for pile driving equipment and other incidental work required to install the sheet piling
- 7) Cutting lifting holes in sheet piling, as necessary
- 8) Pre-drilling for installation into bedrock, as necessary
- 9) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Sheet Pile	SF

19. Bid Item SC-19-001 to SC-19-002: Structural Backfill

a. The measurement for payment for this item will be the actual number of cubic yards of structural backfill placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing and transporting approved material
- 2) Placing and compacting material
- 3) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Structural Backfill	CY

20. Bid Item SC-20-001 to SC-20-006: Trash Rack

a. The measurement for payment for this item will be per actual square foot of trash rack placed in accordance with the DRAWINGS and



SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, fabricating, welding, transporting, and placing trash rack
- 2) Blasting, priming, painting, and coating trash rack, as required
- 3) Providing and attaching necessary hardware to anchor trash rack as specified
- 4) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Trash Rack	SF

J. RT - ROADS AND TRAILS

1. Bid Item RT-01-001: Guard Rail

a. The measurement for payment for this item will be the actual number of linear feet of guardrail placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing and installing all materials, including posts, rails, concrete, cables, tiebacks, and bolts as shown on DRAWINGS
- 2) Excavating, post driving, filling, and compacting
- 3) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Guard Rail	LF

2. Bid Item RT-02-001 to RT-02-005: Trail, Crusher Fines

a. The measurement for payment for this item will be the actual number of square yards of crusher fine trail placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing and placing crusher fines to the required thickness and filter fabric
- 2) Forming and edging, including access ramps
- 3) Furnishing and compacting all material required for a stable subbase
- 4) Furnishing and applying soil sterilant



- 5) Excavating, backfilling and compacting
- 6) Removing and disposing all excess excavated material and debris
- 7) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Trail, Crusher Fines	SY

3. Bid Item RT-03-001 to RT-03-005: Trail, Asphalt

a. The measurement for payment for this item will be the actual number of square yards of asphalt placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, placing, and compacting material
- 2) Aggregate, asphalt cement, asphalt recycling agent, additives, and cores
- 3) Excavating and forming
- 4) Furnishing and compacting all materials required for a stable subbase
- 5) Reconditioning, proof rolling, and tack coating of areas to be patched
- 6) Backfilling and compacting
- 7) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Trail, Asphalt	SY

5. Bid Item RT-04-001: Striping, Roadway
 Bid Item RT-04-002: Striping, Pavement Lot

a. The measurement for payment for this item will be the actual number of linear feet of pavement to be striped. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Transporting striping equipment to and from the project location
- 2) Providing any traffic control and/or detour procedures as outlined in the DRAWINGS and SPECIFICATIONS
- 3) Assuming all costs associated with paint and paint application
- 4) Performing all striping as shown in the DRAWINGS and SPECIFICATIONS



- 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Striping, Roadway	LF
Striping, Pavement Lot	SF

K. BR – BRIDGES

1. Bid Item BR-01-001: Bridge, Pedestrian

- a. The measurement for payment for this item will be the actual number of linear feet of deck span placed in accordance with the DRAWINGS and SPECIFICATIONS, or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, transporting, and placing deck span
- 2) Installing bridge, not including the abutments
- 3) Providing certification
- 4) Providing all other related and necessary labor, equipment, and materials to complete the WORK

- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Bridge, Pedestrian	LF

L. FN – FENCING

1. Bid Item FN-01-001 to FN-01-010: Fence

- a. The measurement for payment for this item will be the actual number of linear feet of fence placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing and installing all materials, including posts, rails, wire, fabric, concrete, and nails as shown on the DRAWINGS
- 2) Excavating, filling, and compacting
- 3) Providing all other related and necessary labor, equipment, and materials to complete the WORK

- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Fence	LF



2. Bid Item FN-02-001 to FN-02-003: Fence, Gate

- a. The measurement for payment for this item will be per each gate placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Furnishing and installing all materials, including fence posts, rails, wire, hinges, locking mechanisms, fabric, concrete, and nails as shown on the DRAWINGS
 - 2) Excavating, filling, and compacting
 - 3) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Fence Gate	EA

M. LS – LANDSCAPING

1. Bid Item LS-01-001: Cottonwood Poles

- a. The measurement for payment for this item will be per each cottonwood pole placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Collecting cottonwood poles and storing
 - 2) Preparing poles per DRAWINGS and SPECIFICATIONS
 - 3) Installing cottonwood poles and filling voids
 - 4) Watering during construction and maintenance periods, as specified
 - 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Cottonwood Poles	EA

2. Bid Item LS-02-001 to LS-02-005: Erosion Control Blanket

- a. The measurement for payment for this item will be the actual number of square yards of erosion control blanket placed measured along the exposed slope (length x width), but will not include the material buried in the anchor trenches or required lapping of the blanket, in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all



of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing and installing all materials, including the erosion control blanket, anchors, and wood stakes
 - 2) Preparing subgrade
 - 3) Placing the blanket per manufacturer's specifications
 - 4) Excavating, trenching, backfilling, and compacting for anchoring
 - 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Erosion Control Blanket	SY

3. Bid Item LS-03-01 to LS-03-03: Turf Reinforcement Mat

- a. The measurement for payment for this item will be the actual number of square yards of turf reinforcement mat placed measured along the exposed slope (length x width), but will not include the material buried in the anchor trenches or required lapping of the blanket, in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
- 1) Furnishing and installing all materials, including the turf reinforcement mat, anchors, and wood stakes
 - 2) Placing the blanket per manufacturer's specifications
 - 3) Excavating, trenching, backfilling, and compacting for anchoring
 - 4) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Turf Reinforcement Mat	SY

4. Bid Item LS-04-001: Turf Sod
Bid Item LS-04-002: Turf Sod, Staped

- a. The measurement for payment for this item will be the actual number of square feet of turf sod placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
- 1) Furnishing and installing sod and staples as shown on the DRAWINGS
 - 2) Preparing subgrade
 - 3) Spraying or mowing for weed control
 - 4) Spraying for insect and disease control



- 5) Installing temporary fence and barriers as shown on the DRAWINGS
- 6) Watering during construction period and maintenance periods, as specified
- 7) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Turf Sod	SF
Turf Sod, Stapled	SF

5. Bid Item LS-05-001: Flower Bulb

a. The measurement for payment for this item will be per each flower bulb placed as shown on the BID in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, transporting, and installing materials
- 2) Mulching
- 3) Weeding
- 4) Spraying for insect and disease control
- 5) Maintaining plants
- 6) Watering during construction warranty period
- 7) Replacing dead or diseased plants during construction warranty period
- 8) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Flower Bulb	EA

6. Bid Item LS-06-001: Irrigation System

a. The measurement for payment for this item will be the actual number of acres of irrigation system coverage placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, transporting, and installing all pipe, heads, valves, valve boxes, couplings, elbows, fittings, and water meters, if required
- 2) Connecting to water supply and all associated fees, including tap fees
- 3) Raising existing sprinkler heads to account for new grading



- 4) Excavating, backfilling, and compacting
- 5) Testing and maintenance
- 6) Repairing or replacing existing irrigation systems to their original condition and function
- 7) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on the percentage of completed and accepted WORK.

Bid Item	Pay Unit
Irrigation System	AC

7. Bid Item LS-07-001 to LS-07-003: Mulch

a. The measurement for payment for this item will be the actual number of acres of mulch placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, transporting, and placing specified material
- 2) Crimping
- 3) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Mulch	AC

8. Bid Item LS-08-001: Mulch, Hydromulch

a. The measurement for payment for this item will be the actual number of acres of mulch placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, transporting, and placing specified material
- 2) Testing
- 3) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Mulch, Hydromulch	AC



9. Bid Item LS-09-001 to LS-09-002: Plug

- a. The measurement for payment for this item will be per each plug placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Furnishing, transporting, and installing materials
 - 2) Excavating and backfilling
 - 3) Preparing soil and adding soil amendments
 - 4) Replacing dead or diseased plants during construction warranty period
 - 5) Watering during construction warranty period
 - 6) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Plug	EA

10. Bid Item LS-10-001 to LS-10-008: Seeding

- a. The measurement for payment for this item will be the actual number of acres of seeding placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Preparing soil, ripping, tilling and fine grading
 - 2) Furnishing seed
 - 3) Drilling or broadcasting seed
 - 4) Spraying or mowing for weed control
 - 5) Spraying for insect and disease control
 - 6) Installing temporary fence and barriers as shown on the DRAWINGS
 - 7) Maintaining all seeded areas
 - 8) Watering during construction warranty period
 - 9) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Seeding	AC

11. Bid Item LS-11-001 to LS-11-005: Shrub / Planting

- a. The measurement for payment for this item will be per each shrub placed in accordance with the DRAWINGS and SPECIFICATIONS



or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Providing and installing plants
- 2) Excavating
- 3) Preparing soil and adding soil amendments
- 4) Replacing dead or diseased plants during construction warranty period
- 5) Watering during construction warranty period
- 6) Mulching
- 7) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Shrub / Planting	EA

12. Bid Item LS-12-001: Soil Preparation and Fine Grading

a. The measurement for payment for this item will be the actual number of acres of soil preparation and fine grading completed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. Measurement will be based upon scaled dimensions in acres of soil preparation and final grading, as defined on the DRAWINGS and SPECIFICATIONS. No payment will be made for soil preparation and fine grading outside of the limits of construction shown on the DRAWINGS and SPECIFICATIONS or for WORK required to repair damage done by the CONTRACTOR's operations. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Fine grading
- 2) Shaping and filling
- 3) Spreading
- 4) Tilling
- 5) Adding soil amendments
- 6) Providing all other related and necessary labor, equipment, and materials required to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Soil Preparation and Fine Grading	AC

13. Bid Item LS-13-001 to LS-13-008: Tree

a. The measurement for payment for this item will be per each tree placed as shown on the BID in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:



- 1) Furnishing, transporting, and installing all materials, including stakes and guying wire
- 2) Excavating
- 3) Adding soil amendments and preparing soil
- 4) Mulching
- 5) Weeding
- 6) Spraying for insect and disease control, as required
- 7) Maintaining trees
- 8) Watering during construction warranty period
- 9) Replacing dead or diseased plants during construction warranty period
- 10) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Tree	EA

14. Bid Item LS-14-001: Willow Brush Layering
 Bid Item LS-14-002: Willow Bundles
 Bid Item LS-14-003: Willow Fascines
 Bid Item LS-14-004: Willow Stakes

a. The measurement for payment for this item will be per each, square yard, or linear foot of willow placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, properly storing, preparing and installing all live willows, biodegradable twine, and soil for filling any voids
- 2) Furnishing and installing wood stakes to the dimensions shown on the details, including cutting wood stakes, if necessary
- 3) Preparing subgrade, including scarifying, excavating, and trenches
- 4) Staking
- 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Willow Brush Layering	SY
Willow Bundles	EA
Willow Fascines	LF
Willow Stakes	EA



UT – UTILITY

1. Bid Item UT-01-001 to UT-01-003: Blow-off Assembly

a. The measurement for payment for this item will be per each blowoff assembly in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Excavating, backfilling and compacting
- 2) Supporting trenches, shoring, or laying slopes back if shoring is not used
- 3) Furnishing and compacting all materials required for a stable subbase, specific drainage material, structural backfill, and other backfill material, including imported backfill material if no suitable onsite material is available
- 4) Constructing the specific bedding, including the furnishing, placing, and compacting of sand, gravel, and rock
- 5) Removing and disposing excess excavated material and debris
- 6) Furnishing all material and installing the blowoff and all appurtenances and fittings
- 7) Furnishing and installing associated manholes and associated items, including, but not limited to, pre-cast concrete manhole and cover, piping, fittings, gate valve, ball valve, valve stem, valve box and cover, and bedding and backfill materials
- 8) Testing and disinfection, removal, and replacement of existing facilities, as required
- 9) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Blow-off Assembly	EA

2. Bid Item UT-02-001: Fire Hydrant

a. The measurement for payment for this item will be per each fire hydrant installed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Locating and protecting all existing utilities in and along the pipe length
- 2) Excavating, backfilling and compacting
- 3) Supporting trenches, shoring, or laying slopes back if shoring is not used
- 4) Furnishing and compacting all materials required for a stable subbase, specific drainage material, structural backfill, and other backfill material, including imported backfill material if no suitable onsite material is available



- 5) Constructing the specific bedding, including the furnishing, placing, and compacting of sand, gravel, and rock
- 6) Removing and disposing excess excavated material and debris
- 7) Furnishing and installing new fire hydrant assembly including all pipe, risers and extensions, valves, valve boxes, tee connection to existing water line, and materials not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS
- 8) Providing and pouring concrete thrust blocks Flushing and testing as shown on DRAWINGS
- 9) Backfilling, compacting, and testing of trench backfill as shown in the DRAWINGS and SPECIFICATIONS
- 10) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Fire Hydrant	EA

3. Bid Item UT-03-001 to UT-03-014: Metal Pipe / Ductile Iron Pipe (DIP)

a. The measurement for payment for this item will be the actual number of linear feet of pipe installed, complete in place, measured along the center line of the pipe from the inside face of one manhole to the inside face of another or from one given station to another given station. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Locating and protecting all existing utilities in and along the pipe length
- 2) Furnishing, transporting, and installing all pipes, special fittings, jointing materials, and materials not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS
- 3) Adjusting location of existing small utilities and valves
- 4) Excavating, backfilling and compacting
- 5) Supporting trenches, shoring, laying slopes back if shoring is not used
- 6) Furnishing and compacting all materials required for a stable subbase, specific drainage material, structural backfill, and other backfill material, including imported backfill material if no suitable onsite material is available
- 7) Conducting exploratory excavation and potholing
- 8) Constructing the specific bedding, including the furnishing, placing, and compacting of sand, gravel, and rock
- 9) Removing and disposing excess excavated material and debris
- 10) Flushing and testing as required by local governing agency
- 11) Furnishing, transporting, and installing all pipes, special fittings, jointing materials, and materials not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS



- 12) Furnishing and installing cathodic protection and test stations as required per the DRAWINGS and SPECIFICATIONS
- 13) Furnishing, transporting, and placing flowfill material
- 14) Furnishing and installing tracer wire, location tape, and pipeline markers in accordance with the DRAWINGS, SPECIFICATIONS, or local governing agency
- 15) Protecting aboveground and underground utilities and service connections
- 16) Removing and disposing of debris, pipe, excess excavated materials, and damaged materials
- 17) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Metal Pipe / Ductile Iron Pipe (DIP)	LF

4. Bid Item UT-04-001 to UT-04-014: Plastic Pipe / High-density Polyethylene Pipe (HDPE)

a. The measurement for payment for this item will be the actual number of linear feet of pipe installed, complete in place, measured along the center line of the pipe from the inside face of one manhole to the inside face of another or from one given station to another given station. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Locating and protecting all existing utilities in and along the pipe length
- 2) Furnishing, transporting, and installing all pipes, special fittings, jointing materials, and materials not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS
- 3) Adjusting location of existing small utilities and valves
- 4) Performing exploratory excavation and potholing
- 5) Excavating, backfilling and compacting
- 6) Supporting trenches, shoring, or laying slopes back if shoring is not used
- 7) Furnishing and compacting all materials required for a stable subbase, specific drainage material, structural backfill, and other backfill material, including imported backfill material if no suitable onsite material is available
- 8) Constructing the specific bedding, including the furnishing, placing, and compacting of sand, gravel, and rock
- 9) Furnishing, transporting, and installing all pipes, special fittings, jointing materials, and materials not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS
- 10) Tapping and/or connecting to pipes or structures
- 11) Furnishing, transporting, and placing flowfill material
- 12) Flushing and testing as required by local governing agency



- 13) Furnishing and installing tracer wire, location tape, and pipeline markers in accordance with the DRAQWINGS, SPECIFICATIONS, or local governing agency
- 14) Removing and disposing of debris, pipe, excess excavated materials, and damaged materials
- 15) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Plastic Pipe / High-Density Polyethylene Pipe (HDPE)	LF

- 5. Bid Item UT-05-001 Sanitary Sewer Manhole
 Bit Item UT-05-002: Sanitary Sewer Manhole, Adjust

a. The measurement for payment for this item will be per each sanitary sewer manhole placed or per vertical foot of adjustment in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing, transporting, and installing all materials, including sheeting and/or bracing, bedding, concrete, reinforcing steel, precast bases, barrels, cones, and/or tops, grade rings, mortar, plastic joint sealant, grout, manhole steps, ring and cover, watertight manhole frame and bolted lid where required and materials not otherwise provided elsewhere in the DRAWINGS and SPECIFICATIONS
- 2) Constructing and shaping the base invert, including all pipe
- 3) Constructing required stub-outs and connections, including pipe and plugs
- 4) Placing ramneck between barrel sections
- 5) Furnishing, transporting, and installing concrete collars, including any steel reinforcement required
- 6) Furnishing, transporting, and placing flowfill material
- 7) Conducting interior waterproofing, as required
- 8) Excavating, backfilling, including furnishing, transporting, and placing material and compacting
- 9) Removing and disposing of debris, pipe, excess excavated materials, and damaged materials
- 10) Providing all other related work and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Sanitary Sewer Manhole	EA
Sanitary Sewer Manhole, Adjust	VF



6. Bid Item UT-06-001: Utility Coordination

- a. The measurement for payment for this item will be per lump sum for all coordination pertaining to existing utilities. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Coordinating with the utility owner as necessary to complete supporting, protecting removing and relocating of utilities
 - 2) Obtaining all required permits and paying associated fees
 - 3) Removing, supporting, relocating and replacing existing facilities, as required
 - 4) Scheduling all WORK
 - 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on the percentage of completed and accepted WORK.

<u>Bid Item</u>	<u>Pay Unit</u>
Utility Coordination	LS

7. Bid Item UT-07-001: Water Valve

- a. The measurement for payment for this item will be per each water valve installed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Excavating backfilling and compacting
 - 2) Cutting pipe and dismantling joints
 - 3) Furnishing and installing water valve, valve stem, valve boxes, extensions, flexible coupling, joint restraints, manhole/vault, manhole frame and cover, access hatch, pipe inside the manhole/vault that is not included in other bid items, as indicated on the DRAWINGS.
 - 4) Testing as called for on the DRAWINGS and SPECIFICATIONS or as required by the local jurisdictional agency
 - 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK
- b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Water Valve	EA

8. Bid Item UT-08-001 to UT-08-004: Bend

- a. The measurement for payment for this item will be on a per each basis for each bend of any angle installed in accordance with the



DRAWINGS and SPECIFICATIONS or as otherwise directed by ENGINEER for any necessary water line relocations. The unit price will include all of CONTRACTOR's costs. This BID item includes:

- 1) Furnishing and installing all bends, including restraint, fasteners, concrete thrust blocks, and items not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS
- 2) Providing all other related and necessary labor, equipment, and materials to complete the WORK

b. Payment will be based on units completed and accepted.

<u>Bid Item</u>	<u>Pay Unit</u>
Bend	EA

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION



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