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.

Bid Item	Pay Unit
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 ten (10) percent of the total BID.

Bid Item	Pay Unit
Mobilization	LS

3. Bid Item GN-03-001: Potholing

- The measurement and payment for potholing will be on a per each a. 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:
 - Coordinating with utility companies 1)
 - Locating and protecting all existing utilities in and along the 2) PROJECT reach
 - Identifying the utility type, depth, and dimensions prior to 3) construction
 - Preparing and submitting pothole logs to the ENGINEER 4)
 - Backfilling potholes and patching roadway, as required 5)
- Payment will be based on units completed and accepted. b.

		Bid Item	Pay Unit
	P	Potholing	EA
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:		n. The lump sum price
	1) 2)	Staking horizontal and vertical alignmer Providing cut sheets to the OWNER or or representative	
	3) 4)	Providing replacement stakes	

- Locating existing utilities 4)
- Staking overlot grading 5)
- Setting subgrade elevations and offsets 6)
- Setting temporary control points 7)
- Re-establishing land monuments 8)
- Finishing grades and structure elevations by a Professional 9) Licensed Surveyor, as required, for record or as-built **DRAWINGS**
- Finishing grades and elevations by a Professional Licensed 10) 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
 - 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.

Bid Item	Pay Unit
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.

Bid Item	Pay Unit
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
 - 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.

Bid Item	Pay Unit
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.

Bid Item	Pay Unit
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	EA
Check Dam, Reinforced	EA

- 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 I	tem ESC-05-001: Concrete Washout Area	
	a.	The measurement for payment for this iten washout area placed in accordance with the SPECIFICATIONS or as otherwise directe unit price will include all of the CONTRAG item includes, but is not limited to:	e DRAWINGS and ed by the ENGINEER. The
		 Excavating pit, constructing berm, or pan/tub concrete washout service Providing and installing vehicle trace and riprap) Providing and installing construction Removing concrete washout and construction 	king control (crushed rock
		 approval Restoring area to pre-project or finis Providing all other related and neces and materials to complete the WOR 	ssary labor, equipment,
	b.	Payment will be based on units completed	and accepted.
		Bid Item	Pay Unit
		Concrete Washout Area	EA
6.	Bid I	tem ESC-06-001: Culvert Inlet Protection	
	a.	The measurement for payment for this iten inlet protection placed in accordance with SPECIFICATIONS or as otherwise directer unit price will include all of the CONTRAC item includes, but is not limited to:	the DRAWINGS and ed by the ENGINEER. The
		 Providing and placing the approved Removing and restoring, upon appro Restoring area to pre-project or finis Providing all other related and neces and materials to complete the WOR 	oval shed grades and conditions ssary labor, equipment,
	b.	Payment will be based on units completed	and accepted.
		Bid Item	Pay Unit

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

Payment will be based on units completed a	nd accepted.
Bid Item	Pay Unit
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:
 - Excavating and stockpiling material 1)
 - Furnishing and compacting swales 2)
 - 3) Furnishing materials and constructing earth dike
 - Providing and installing a sediment trap or basin 4)
 - Providing and installing geotextile or mat, anchors, and 5) crushed rock
 - 6) Installing a temporary culvert, as required
 - Removing earth dike and drainage swale, upon approval 7)
 - Restoring area to pre-project or finished grades and conditions 8)
 - Providing all other related and necessary labor, equipment, 9) and materials to complete the WORK
 - b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit	
Earth Dike and Drainage Swale	LF	

- 9. Bid Item ESC-09-001: Inlet Protection Bid Item ESC-09-002: Outlet Protection
 - The measurement for payment for these items will be per each inlet a. 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.

Bid Item	Pay Unit
Inlet Protection	EA
Outlet Protection	EA

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

- The measurement for payment for this item will be the actual number a. 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
 - Providing all other related and necessary labor, equipment, 4) and materials to complete the WORK

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

	Bid Item	Pay Unit
	Rock Sock / Curb Sock	LF
Bid I	tem ESC-11-001: Rough Cut Street Control	
a.	The measurement for payment for this item wi cut street control placed in accordance with the SPECIFICATIONS or as otherwise directed by unit price will include all of the CONTRACTO item includes, but is not limited to:	e DRAWINGS and y the ENGINEER. The
	 Providing and installing geotextile socks rock or compacted earthen berms Removing prior road surfacing and pavi Providing all other related and necessary and materials to complete the WORK 	ng
b.	Payment will be based on units completed and accepted.	
	Bid Item	Pay Unit
	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 berm 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.

Bid Item	Pay Unit	
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.

		Bid Item	Pay Unit
		Sediment Control Log	LF
14.	Bid Ite	m 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. T unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to: 		AŴINGS and the ENGINEER. The &s costs. This BID	

- 1) Excavating and stockpiling material with appropriate BMPs
- 2) Furnishing rock, compacting soils, and installing all materials, as required

16.

- 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.

		Bid Item	Pay Unit
	S	ediment Trap	EA
		ESC-15-001: Silt Fence ESC-15-002: Silt Fence, Reinforced	
a.	of li DRA ENG	measurement for payment for this item with near feet of silt fence placed in accordance AWINGS and SPECIFICATIONS or as of GINEER. The unit price will include all o as. This BID item includes, but is not limit	ce with the otherwise directed by the f the CONTRACTOR's
	1) 2)	Providing and installing fence material Removing and disposing, including bu	
	 approval 3) Restoring (including revegetation) to pre-project conditions or as shown on the DRAWINGS 		re-project conditions or
	4)	Providing all other related and necessa and materials to complete the WORK	ry labor, equipment,
b.	b. Payment will be based on units completed and accepted.		
		Bid Item	Pay Unit
	S	ilt Fence	LF
	S	ilt Fence, Reinforced	LF
Bid	Item E	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		

- 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.



Bid Item	Pay Unit
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	LS

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 01 29 00 - 14	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	EA
Vehicle Tracking Control with Construction Mat	EA
Vehicle Tracking Control with TRM	EA
Vehicle Tracking Control with Wheel Wash	EA
Bid Item ESC-21-001: Street Maintenance	
a No separate measurement for navment will be	made for any labor

- 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) 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.

Bid Item	Pay Unit
Street Maintenance	LS

- 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. 01 29 00 - 16

		Bid Item	Pay Unit
		Tree Protection, Fence	LF
23.	Bid It	tem ESC-23-001: Tree Protection, Beaver	
	a.	The measurement for payment for this item of linear feet of tree protection fence placed DRAWINGS and SPECIFICATIONS or as ENGINEER. The unit price will include all costs. This BID item includes, but is not lim	in accordance with the otherwise directed by t of CONTRACTOR's
		 Furnishing, installing, and adjusting a posts, rails, wire, fabric, concrete, and DRAWINGS 	-
		 Excavating, filling, and compacting Furnishing and installing beaver prote Providing all other related and necess and materials to complete the WORK 	ary labor, equipment,
	b.	Payment will be based on units completed a	nd accepted.
		Bid Item	Pay Unit
		Tree Protection, Beaver	LF
24		ESC 24 001 Dainformed Data Dama	
24.		tem ESC-24-001 Reinforced Rock Berm tem ESC-24-002: Reinforced Rock Berm, Cu	lvert
24.			will be the actual numb l in accordance with the otherwise directed by t of the CONTRACTOR
24.	Bid It	 tem ESC-24-002: Reinforced Rock Berm, Cu The measurement for payment for this item of linear feet of reinforced rock berm placed DRAWINGS and SPECIFICATIONS or as ENGINEER. The unit price will include all costs. This BID item includes, but is not lime 1) Excavating and removing material 2) Providing and placing crushed rock a 3) Removing reinforced rock berm, includisposal, upon approval 4) Restoring area to pre-project or final 5) Providing all other related and necess 	will be the actual number of the contract with the otherwise directed by to of the CONTRACTOR ited to: nd wire mesh uding haul off and grades and conditions sary labor, equipment,
24.	Bid It	 tem ESC-24-002: Reinforced Rock Berm, Cu The measurement for payment for this item of linear feet of reinforced rock berm placed DRAWINGS and SPECIFICATIONS or as ENGINEER. The unit price will include all costs. This BID item includes, but is not lime 1) Excavating and removing material 2) Providing and placing crushed rock a 3) Removing reinforced rock berm, includisposal, upon approval 4) Restoring area to pre-project or final 5) Providing all other related and necess and materials to complete the WORK 	will be the actual number of in accordance with the otherwise directed by to of the CONTRACTOR inited to: nd wire mesh uding haul off and grades and conditions ary labor, equipment,
24.	Bid It	 tem ESC-24-002: Reinforced Rock Berm, Cu The measurement for payment for this item of linear feet of reinforced rock berm placed DRAWINGS and SPECIFICATIONS or as ENGINEER. The unit price will include all costs. This BID item includes, but is not lime 1) Excavating and removing material 2) Providing and placing crushed rock a 3) Removing reinforced rock berm, including disposal, upon approval 4) Restoring area to pre-project or final 5) Providing all other related and necess and materials to complete the WORK Payments will be based on units completed 	will be the actual numl l in accordance with the otherwise directed by t of the CONTRACTOR ited to: nd wire mesh uding haul off and grades and conditions ary labor, equipment,
24.	Bid It	 tem ESC-24-002: Reinforced Rock Berm, Curthe measurement for payment for this item of linear feet of reinforced rock berm placed DRAWINGS and SPECIFICATIONS or as ENGINEER. The unit price will include all costs. This BID item includes, but is not lime 1) Excavating and removing material 2) Providing and placing crushed rock a 3) Removing reinforced rock berm, including area to pre-project or final 5) Providing all other related and necess and materials to complete the WORK Payments will be based on units completed 	will be the actual number d in accordance with the otherwise directed by to of the CONTRACTOR ited to: nd wire mesh uding haul off and grades and conditions eary labor, equipment, and accepted. <u>Pay Unit</u>
24.	Bid It	 tem ESC-24-002: Reinforced Rock Berm, Cu The measurement for payment for this item of linear feet of reinforced rock berm placed DRAWINGS and SPECIFICATIONS or as ENGINEER. The unit price will include all costs. This BID item includes, but is not lime 1) Excavating and removing material 2) Providing and placing crushed rock a 3) Removing reinforced rock berm, including disposal, upon approval 4) Restoring area to pre-project or final 5) Providing all other related and necess and materials to complete the WORK Payments will be based on units completed 	will be the actual numb l in accordance with the otherwise directed by t of the CONTRACTOR ited to: nd wire mesh uding haul off and grades and conditions ary labor, equipment,

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 Telephone / Cable / Electric /Similar

- 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
			elocate Telephone / Cable / Electric / milar	LF
3.		Bid I	tem RR-03-001: Relocate Water Service	
	a.	basis with direc	neasurement for payment for this item will for the actual number of water services rel the DRAWINGS and SPECIFICATIONS of ted by ENGINEER. The unit price will ind TRACTOR's costs. This BID item include	ocated in accordance or as otherwise clude all of
		1) 2) 3) 4)	Coordinating with property owner and lo Locating and protecting service line and Excavating, backfilling and compacting Supporting trenches, shoring, or sloping t	other utilities
		5)	shoring is not used Furnishing and placing required pipe bed materials	ding and backfill
		6) 7)	Tapping or connecting to pipe, meters and Furnishing, transporting, and installing al tubing, fittings or items not otherwise pro- in the DRAWINGS and SPECIFICATIO	l new pipe, valves, wided for elsewhere
		8) 9)	Removing and re-installing meters and m Removing and disposing all existing pipe excess materials	eter pits as necessary
		10)	Providing and maintaining a temporary a over trenches within City right-of- way u reconstruction is complete; and removing materials used for temporary all-weather	ntil road and disposing all
		11)	Providing all other related and necessary and materials to complete the WORK	
	b.	Payn	nent will be based on units completed and a	accepted.
			Bid Item	Pay Unit

	Dia item	
	Relocate Water Service	EA
Bid	Item RR-04-001 to RR-04-006: Relocate Tree, X	K-Inch Diameter
a.	The measurement for payment for this item w relocated tree in accordance with the DRAWI SPECIFICATIONS or as otherwise directed b unit price will include all of the CONTRACT	NGS and y the ENGINEER. The

1)

item includes, but is not limited to:

- Removing and relocating tree Excavating and backfilling, as necessary 2)
- Furnishing amendments and preparing the soil 3)



- 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.

Bid Item	Pay Unit
Relocate Tree, X-Inch Diameter	EA

- 5. 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.

	Bid Item	Pay Unit
	Remove and Reset Fence	LF
Bid Iten Bid Iten	m RR-06-001: Remove Structures and Obstruction m RR-06-002: Remove Abandoned Utility m RR-06-003: Remove Asphalt Pavement m RR-06-004: Remove Concrete Pavement m RR-06-005: Remove Concrete Structure m RR-06-006: Remove Curb and Gutter m RR-06-007: Remove Fence m RR-06-008: Remove Guardrail m RR-06-009: Remove Guardrail m RR-06-010: Remove Manhole m RR-06-010: Remove Pavement Markings m RR-06-011: Remove Pipe m RR-06-011: Remove Sediment from Structure m RR-06-013: Remove Asphalt Sidewalk / Trail m RR-06-014: Remove Concrete Sidewalk / Trail	/ Pipe / Similar

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, < 6-Inch in Diameter Bid Item RR-06-019: Remove Tree, 6-Inch to 12-Inch in Diameter Bid Item RR-06-020: Remove Tree, 12-Inch to 24-Inch in Diameter Bid Item RR-06-021: Remove Tree, > 24-Inch in Diameter Bid Item RR-06-022: 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

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	СҮ

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



Bid Item	Pay Unit
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 <6-Inch Diameter	EA
Remove Tree 6-Inch to 12-Inch Diameter	EA
Remove Tree 12-Inch to 24-Inch	
Diameter	EA
Remove Tree >24-Inch Diameter	EA
Remove Inlet	EA

- 7. Bid Item RR-07-001 to RR-07-004: Remove and Replace X-Inch 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.

	Bid Item	Pay Unit
	Remove and Replace Waterline X-Inch	LF
8. E	Bid Item RR-08-001: Remove, Store, and Reset Sigr	1
а	. The measurement for payment for this item w accordance with the DRAWINGS and SPECH otherwise directed by the ENGINEER. The ur of the CONTRACTOR's costs. This BID item limited to:	FICATIONS or as nit price will include all
	 Removing existing signage such that signounting materials are in as-found conditional storing and protecting existing signage mounting materials Installing removed materials and furnist required, including posts, bolts and nuts Providing all other related and necessar and materials required to complete the stories. 	dition and associated hing new materials, as s, and signage y labor, equipment,
b	Payment will be based on units completed and	l accepted.
	Bid Item	Pay Unit

Diu Itelli	I ay Onic
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 as measured in plan view from the DRAWINGS) but will not include the material buried in the anchor trenches or required lapping of the geogrid or slope variability, 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.



Bid Item	Pay Unit
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 as measured in plan view from the DRAWINGS) but will not include the material buried in the anchor trenches or required lapping of the geotextile or slope variability, 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.

Bid Item	Pay Unit
Geotextile, Non-Woven	SY
Geotextile, Woven	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 moisturedensity 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.

Bid Item	Pay Unit
Clay Liner	СҮ

- 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.

Bid Item	Pay Unit
Earthwork, Excavation, and Fill On Site	СҮ
Earthwork, Excavation, and Haul Off Site	СҮ

3. Bid Item ESP-02-003: Earthwork, Excavation, and Haul to Landfill Bid Item ESP-02-004: Earthwork, Excavation, and Haul to Hazardous Material Landfill



- a. The measurement for payment for this item will be the actual number of cubic yards excavated and hauled from the site to a landfill or a hazardous material landfill, 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 properly to an appropriate landfill or hazardous material landfill
 - 2) Payment of landfill fees
 - 3) Provision of appropriate personal protection equipment for contaminated soils, if applicable.
 - 4) Cross hauling material
 - 5) Removing and hauling deleterious materials
 - 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
Earthwork, Excavation and Haul to	
Landfill	CY
Earthwork, Excavation and Haul to	
Hazardous Material Landfill	CY

- 4. 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 moisturedensity 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.

Bid Item	Pay Unit
Earthwork, Imported Fill	CY

5. 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.

Bid Item	Pay Unit
Export of Excess Material	СҮ

6. 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.

		Bid Item	Pay Unit
		Excavation, Muck, Replace with Approved Material	СҮ
7.	Bid Iter Bid Iter Bid Iter	n ESP-06-001: Excavation, Rock, Fill On Site n ESP-06-002: Excavation, Rock, Haul Off Sit n ESP-06-003: Excavation, Rock, Stockpile Or n ESP-06-004: Excavation, Rock, Stockpile, ar	nly nd Reuse
	o I E I S C	The measurement for payment for this item will of cubic yards of material removed in accordance DRAWINGS and SPECIFICATIONS or as othe ENGINEER. The quantity is based on the neat 1 DRAWINGS and SPECIFICATIONS, and does hrinkage or swell. The unit price will include a CONTRACTOR'S costs. This BID item will be of the ENGINEER. This BID item includes, but	ce with the erwise directed by the ines shown on the s not account for ll of the only at the direction
	2	 Excavating Properly disposing of rock Stockpiling material with stockpile management 	gement BMPs and
		 Hauling, placing, and compacting fill mat Reconditioning material, as necessary, to 	terial
	7	density requirementsProviding all other related and necessary and materials to complete the WORK	labor, equipment,
	b. P	ayment will be based on units completed and a	accepted.
		Bid Item	Pay Unit
		Excavation, Rock, Fill On Site	СҮ
		Excavation, Rock, Haul Off Site	СҮ

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		Ex	cavation, Stockpile	e Only		CY
		Ex	cavation, Rock, St	ockpile and Reus	2	СҮ
	Bid I	tem ES	P-07-001: Topsoil P-07-002: Topsoil P-07-003: Topsoil	l - Wetland, Excav	vate, Stockpile,	and Replace
 Bid Item ESP-07-003: Topsoil - Wetland, Excavate, Haul C a. The measurement for payment for this item will be the of cubic yards of topsoil excavated, properly stockpill in accordance with the DRAWINGS and SPECIFICA otherwise directed by the ENGINEER. No measurem will be made unless changes to the CONTRACT DO made, in which case the ENGINEER will perform m the modified volume. The quantity is based on the nee on the DRAWINGS and SPECIFICATIONS, and do for shrinkage or swell. No additional payment will be disturbed outside of construction limits or areas with limits that are not identified on the DRAWINGS and SPECIFICATIONS to be disturbed, unless approved ENGINEER. The unit price will include all of the CC costs. This BID item includes, but is not limited to: 		erly stockpiled, SPECIFICATI o measurement FRACT DOCU perform measu ed on the neat le NS, and does r ment will be ma r areas within c VINGS and ss approved by all of the CONT	and replaced ONS or as of this item MENTS are urement of ines shown not account ade for areas onstruction the TRACTOR's			
		1) 2)		egregating unland		

- 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.

Bid Item	Pay Unit
Topsoil, Excavate, Stockpile, and Replace	СҮ
Topsoil - Wetland, Excavate, Stockpile, and Replace	СҮ
Topsoil - Wetland, Excavate, Haul Off Site	СҮ

- 9. 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 moisturedensity 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.

Bid Item	Pay Unit
Topsoil, Imported, Upland	СҮ
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.

Bid Item		Pay Unit	
	Aggregate Base Course	СҮ	

- 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.

Bid Item	Pay Unit
Bedding, Granular, Type I	СҮ
Bedding, Granular, Type II	СҮ

- 3. Bid Item RW-03-001 to RW-03-006: Boulder Edging, Single Row, Grouted, X-Inch Boulders
 - 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 fiber-mesh 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.

Bid Item	Pay Unit		
Boulder Edging, Single Row, Grouted, X-Inch Boulders	LF		
Bid Item RW-04-001 to RW-04-006: Boulder Edging, Single Row, Ungrouted, X-Inch Boulders			

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

4.



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

	Bid Item	Pay Uni
	Boulder Edging, Single Row, Ungrouted, X-Inch Boulders	LF
	Item RW-05-001 to RW-05-006: Boulder Wall, Gr Iders	routed, X-Inch
a.	The measurement for payment for this item will of square feet of grouted boulder wall face, inclu placed in accordance with the DRAWINGS and or as otherwise directed by the ENGINEER. The include all of the CONTRACTOR's costs. This I but is not limited to:	iding buried de SPECIFICATI e unit price will
	 Excavating, backfilling, and compacting I stabilizing subgrade Furnishing, handling, stockpiling, and pla including foundation boulders Disposing rejected boulders Placing riprap and bedding, as required Placing, vibrating, finishing, and curing g providing fiber-mesh and color in the grout Furnishing and installing weep drains Furnishing and placing steel reinforcement Washing excess grout from all boulders p curing Providing all other related and nec equipment, and materials to complete the 	cing boulders, rout, including ut, as required nt rior to the grou essary labor,
	Payment will be based on units completed and a	a a a m ta al

Bid Item RW-06-001 to RW-06-006: Boulder, Feature, X-Inch

6.

- 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.

Bid Item	Pay Unit
Boulder, Feature, X-Inch	EA

- 7. Bid Item RW-07-001 to RW-07-006: Boulders, Grouted, X-Inch
 - 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 fiber-mesh 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.

Pay Unit
SY

8. Bid Item RW-08-001 to RW-08-006: Boulders, Ungrouted, X-Inch



- 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.

		Bid Item	Pay Unit
	В	oulders, Ungrouted, X-Inch	SY
Bid	Item R	W-09-001: Filter Material, Granular	
a.	The measurement for payment for this item will be the actual nur of cubic yards of filter material placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed b ENGINEER. The unit price will include all of the CONTRACTO costs. This BID item includes, but is not limited to:		ordance with the therwise directed by the f the CONTRACTOR's
	1) 2)	Furnishing, transporting, and placing al Furnishing, transporting, and placing g material	
	3) Excavating, preparing subgrade, backfilling, and compacting to the lines and final grades		
	 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

- 10. Bid Item RW-010-001 to RW-010-005: Riprap, Conventional, Type X
 - 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.

CY

Filter Material, Granular

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
- 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, Conventional, Type X	CY

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

Bid Item	Pay Unit
Riprap, Void-Filled, Type X	СҮ

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

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
- 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.

Bid Item	Pay Unit
Soil Riprap, Type X	СҮ

- Bid Item RW-13-001 to RW-13-005: Remove, Stockpile, and Reset Riprap, Type X
 - a. The measurement for payment for this item will be the actual number of cubic yards of riprap 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, hauling, and stockpiling existing riprap
 - 2) Excavating, backfilling, and compacting/plating, as required
 - 3) Resetting all riprap and bedding
 - 4) Restoring area, as required

14.

- 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, Stockpile, and Reset Riprap, Type X	СҮ
	Item RW-14-001 to RW-14-005: Remove, Stockp ap, Type X	oile, and Reset Soil
a.	The measurement for payment for this item wil	l be the actual number

The measurement for payment for this item will be the actual number of cubic yards of soil riprap 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, hauling, and stockpiling existing riprap and bedding
- 2) Excavating, backfilling, and compacting/plating, as required
- 3) Providing additional approved material required to mix with riprap or wash with water into riprap, as required
- 4) Resetting all riprap and bedding
- 5) Restoring area, as required
- 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
Remove, Stockpile, and Reset Soil Riprap, Type X	СҮ

- 15. Bid Item RW-15-001 to RW-15-006: Remove, Stockpile, and Reset Boulder, Feature, X-Inch
 - a. The measurement for payment for this item will be per each boulder 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, hauling, and stockpiling existing boulders
 - 2) Excavating, backfilling, and compacting/plating, as required
 - 3) Resetting all boulders
 - 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, Stockpile, and Reset Boulder, Feature, X-Inch	EA

G. BP - BANK PROTECTION

- 1. Bid Item BP-01-001: Soil Lift, Wrapped
 - a. The measurement for payment for this item will be per linear foot of lift, for each soil lift, 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: Concrete Box Culvert, Pre-Cast, (# Cells) #'W x #'H
 - 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 ENGINEER will specify the number of cells and the opening width and height in the bid item description for each size of pre-cast box culvert. 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 sandbags
 - 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	
		oncrete Box Culvert, Pre-Cast (# Cells) #'W x #'H	LF	
		S-02-001 to SS-02-007: Flared End Section ipe (RCP), X-Inch Diameter	n, Reinforced	
a. The measurement for payment for this item will be per each fla end section placed in accordance with the DRAWINGS and SPECIFICATIONS, or as otherwise directed by the ENGINEE The unit price will include all of the CONTRACTOR'S COST BID item includes, but is not limited to:		WINGS and y the ENGINEER.		
	1) 2)	Preparing / stabilizing subgrade foundati Furnishing, transporting, and installing p		
	3)	sections Furnishing, placing, and curing concrete for toe walls	and reinforcing steel	
	4)	Supporting trenches, shoring, or laying s is not used	shoring, or laying slopes back if shoring	
	5)	Connecting end sections to pipe, including restraints as shown on DRAWINGS	ng tie backs and joint	
	 Furnishing, transporting, and installing jointing materials including: O-rings, gaskets, bolts, concrete collars, conne bands, and other miscellaneous items 			
	7)	Excavating, including exploratory excav	ation	
	8)			
	9)			
	10)	Removing and disposing debris, excess and damaged materials	excavated materials,	
	11)	e		
•	Payn	Payment will be based on units completed and accepted.		
		Bid Item	Pay Unit	
	F1	ared End Section, Reinforced Concrete		
		pe (RCP), X-Inch Diameter	EA	

3. Bid Item SS-03-001 to SS-03-060: (Type) Manhole, X-Foot Diameter, X-Foot Depth



- 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:
 - 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
 - 7) Furnishing, transporting, and placing flowfill material
 - 8) Interior and exterior water proofing
 - 9) Excavating, backfilling, and compacting, including imported backfill material if no suitable onsite material is available
 - 10) Removing and disposing debris, excess excavated materials, and damaged materials
 - 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.

Bid Item	Pay Unit
(Type) Manhole, X-Foot Diameter, X- Foot Depth	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.

Bid Item	Pay Unit
Manhole, Adjust Rim	VF

- 5. Bid Item SS-05-001 to SS-05-011: Pipe Plug, X-Inch Diameter
 - 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 watertight 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.

Bid Item	Pay Unit
Pipe Plug, X-Inch Diameter	EA

- 6. Bid Item SS-06-001 to SS-06-085: Reinforced Concrete Pipe (RCP), (Type), (Size)
 - 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
		einforced Concrete Pipe (RCP), (Type), Size)	LF
Bid	Item S	SS-07-001 to SS-07-067: Storm Inlet, (Type)	, (Size)
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:		S and the ENGINEER. The
	1)	Excavating, backfilling, and compacting; backfill material if no suitable onsite mate	e 1
	2)	Supporting trenches, shoring, or sloping to shoring is not used	
	3)	Protecting adjacent structures and propert	у

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, (Type), (Size)	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

- 9. Bid Item SS-09-001 to SS-09-005: Trench Plug, (Size)
 - a. The measurement for payment for this item will be per each trench 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 all equipment and materials to install trench plug
- 2) Removing and disposing of trench plugs at the conclusion of the WORK
- 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
Trench Plug, (Size)	EA

- I. SC STRUCTURES AND MISCELLANEOUS CONCRETE
 - 1. Bid Item SC-01-001: Concrete Box Culvert, Cast-In-Place, (# Cells) #' W x #' H
 - 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 ENGINEER will specify the number of cells and the opening width and height in the bid item description for each size of cast-in-place box culvert. 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 sandbags
 - 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

3.

- 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, (# Cells) - #' W x #' H	СҮ
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:	
	 Excavating and disposing of material Backfilling and compacting Furnishing, transporting, and placing bo Furnishing and placing concrete Providing all other related and necessary and materials to complete the WORK 	
b. Payment will be based on units completed and accepted.		accepted.
	Bid Item	Pay Unit
	Bollard, Collapsible	EA
	Bollard, Fixed in Place	EA
	Bollard, Removable	EA
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	

- 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 X-Foot 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.

Bid Item	Pay Unit
Concrete Curb and Gutter with X-Foot	
Pan	LF

- 5. Bid Item SC-05-001 to SC-05-005: Concrete Low Flow Channel, X-Inch Thick
 - a. The measurement for payment for this item will be the actual number of square yards 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.

Bid Item	Pay Unit
Concrete Low Flow Channel, X-Inch	
Thick	SY

6. Bid Item SC-06-001 to SC-06-005: Concrete Pan, X-Inch Thick

- 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, X-Inch Thick	SY

- 7. Bid Item SC-07-001 to SC-07-007: Reinforced Concrete Pavement, X-Inch Thick
 - 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 fiber-mesh 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, X-Inch	
Thick	SY

- 8. Bid Item SC-08-001 to SC-08-005: Concrete Sidewalk / Trail, X-Inch Thick
 - 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 fiber-mesh 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
	Co	ncrete Sidewalk / Trail, X-Inch Thick	SY
Bid I	tem SC	-09-001 to SC-09-005: Concrete Flatwork	
a.	of squ DRA ENGI	neasurement for payment for this item will hare yards of concrete placed in accordance WINGS and SPECIFICATIONS or as other NEER. The unit price will include all of th This BID item includes, but is not limited	with the rwise directed by the e CONTRACTOR's
	1)	Sawcutting, removing and disposing all da concrete, gravel, or other surface debris	maged and broken
	2)	Furnishing, forming and placing concrete, and fiber-mesh and materials not otherwis elsewhere in the DRAWINGS and SPECI	e provided for
	3)	Furnishing and installing expansion joints	
	4)	Furnishing and applying the curing compo	
	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, X-Inch Thick	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, Reinforced Cutoff Wall	СҮ
Concrete, Cutoff Wall	СҮ

- 12. Bid Item SC-12-001 to SC-12-016: Concrete, (Type)
 - 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 fiber-mesh 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, (Type)	СҮ



- 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)	СҮ
Grout	СҮ

- 14. Bid Item SC-14-001 to SC-14-003: Handrail, Steel, (Type)
 - 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, (Type)	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 face 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 back-drain material
- 8) Placing clay soil over granular rock back-drain 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	SFF
Retaining Wall, Redi – Rock	SFF

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.

Bid Item	Pay Unit	
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.

Bid Item	Pay Unit	
Sheet Pile Cap, Steel	LF	

- 18. Bid Item SC-18-001 to SC-18-003: Sheet Pile, (Type)
 - 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, (Type)	SF	
01 29 00 - 54		

- 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, Class I	СҮ
Structural Backfill, Class II	СҮ

20. Bid Item SC-20-001 to SC-20-006: Trash Rack, (Size)

- 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.

Bid Item	Pay Unit
Trash Rack, (Size)	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.

Bid Item	Pay Unit
Guard Rail	LF

- 2. Bid Item RT-02-001 to RT-02-005: Trail, Crusher Fines, X-Inch Thick
 - 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, X-Inch Thick	SY

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

5.

- 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	
	Т	rail, Asphalt, X-Inch Thick	SY	
		T-04-001: Striping, Roadway T-04-002: Striping, Parking Lot		
a.	The measurement for payment for this item will be the actual nun of linear feet of roadway or square feet of parking lot to be striped The unit price will include all of the CONTRACTOR's costs. Thi BID item includes, but is not limited to:			
	1)	Transporting striping equipment to and location	l from the project	
	 Providing any traffic control and/or detour procedures as outlined in the DRAWINGS and SPECIFICATIONS 			
	3)			
	 Performing all striping as shown in the DRAWINGS and SPECIFICATIONS Providing all other related and necessary labor, equipment, and materials to complete the WORK 		DRAWINGS and	
			ry labor, equipment,	
b.	b. Payment will be based on units completed and accepted.		d accepted.	
		Bid Item	Pay Unit	
	S	triping, Roadway	LF	
	Striping, Parking Lot			

- 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



Κ.

- Providing all other related and necessary labor, equipment, and materials to complete the WORK 7)
- Payment will be based on units completed and accepted. b.

		Bid Item	Pay Unit	
		Road, Asphalt, X-Inch Thick	SY	
6.	Bid Item RT-06-001: Porous Pavers, Grass-Crete Bid Item RT-06-002: Porous Pavers, Grass-Pavers			
	a.	The measurement for payment for this item will be the actual number of square yards of porous pavers 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:		
	 Excavating and removing material Backfilling and compacting Furnishing, handling, stockpiling, and placing approved product as shown on the DRAWINGS and in accordance with manufacturer's specifications. 			
		4) Providing all other related work and nec equipment, and materials to complete th	•	
	b.	b. Payment will be based on units completed and accepted.		
		Bid Item	Pay Unit	
		Porous Pavers, Grass-Crete	SY	
		Porous Pavers, Grass-Pavers	SY	
BR –	BRID	GES		
1.	Bid I	tem BR-01-001: #'L x #'W Bridge, Pedestrian,	(Type)	
	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:		
		 Furnishing, transporting, and placing de Furnishing, transporting, and installing the abutments 		
		 Providing certification Providing all other related and necessary and materials to complete the WORK 	y labor, equipment,	
	b.	Payment will be based on units completed and accepted.		

Bid Item	Pay Unit
#'L x #'W Bridge, Pedestrian, (Type)	LS
01 29 00 - 58	

- L. FN FENCING
 - 1. Bid Item FN-01-001 to FN-01-010: Fence, (Type)
 - 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.

Bid Item	Pay Unit
Fence, (Type)	LF

- 2. Bid Item FN-02-001 to FN-02-003: Fence, Gate, (Type)
 - 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, (Type)	EA
LS – LANDSCAPING	

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

M.

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-02-006: Erosion Control Blanket, (Type)

- a. The measurement for payment for this item will be the actual number of square yards of erosion control blanket placed as measured in plan view from the DRAWINGS, but will not include the material buried in the anchor trenches or required lapping of the blanket or slope variability, 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 but not limited to the erosion control blanket, anchors, wood stakes, and hand-shaken straw (if required).
 - 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.

Bid Item	Pay Unit
Erosion Control Blanket, (Type)	SY

- 3. Bid Item LS-03-01 to LS-03-03: Turf Reinforcement Mat, (Type)
 - a. The measurement for payment for this item will be the actual number of square yards of turf reinforcement mat placed as measured in plan view from the DRAWINGS) but will not include the material buried in the anchor trenches or required lapping of the blanket or slope variability, 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.

-	Bid Item	Pay Unit
	Turf Reinforcement Mat, (Type)	SY
	n LS-04-001: Turf Sod n LS-04-002: Turf Sod, Stapled	
of ar Tl	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 staple DRAWINGS	es as shown on the
2)		
3)		
,	 Spraying for insect and disease control Installing temporary fence and barriers as shown on the DRAWINGS 	
5)		
6)		nd maintenance periods,
7)	7) Providing all other related and necessary labor, equipment, and materials to complete the WORK	
b. Pa	ayment will be based on units completed and	d accepted.
_	Bid Item	Pay Unit
	Turf Sod	SF

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

Turf Sod, Stapled

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:

SF

- 1) Furnishing, transporting, and installing materials
- 2) Mulching
- 3) Weeding
- 4) Spraying for insect and disease control
- 5) Maintaining plants
- 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
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-06-002: Temporary Irrigation, Piped
 - 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) 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 and usage fees
 - 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.

Bid Item	Pay Unit
Temporary Irrigation, Piped 01 29 00 - 62	LS

- 8. Bid Item LS-06-003: Temporary Irrigation, Hand Watering
 - a. The measurement for payment for this item will be the actual number of days of hand watering performed by the CONTRACTOR. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:
 - 1) Furnishing all equipment required for hand watering.
 - 2) Obtaining water supply and all associated fees, including tap and usage fees
 - 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.

Bid Item	Pay Unit
Temporary Irrigation, Hand Watering	DAY

- 9. Bid Item LS-07-001 to LS-07-003: Mulch, (Type)
 - 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

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- 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, (Type)	AC

- 10. 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

- 11. Bid Item LS-09-001 to LS-09-002: Plug, (Type)
 - 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) 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, (Type)	EA

- 12. Bid Item LS-10-001 to LS-10-008: Seeding, (Type)
 - 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) Installing temporary fence and barriers as shown on the DRAWINGS
 - 5) Maintaining all seeded areas
 - 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
Seeding, (Type)	AC

- 13. Bid Item LS-11-001 to LS-11-005: Shrub / Planting, (Size)
 - 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) Mulching
- 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
Shrub / Planting, (Size)	EA

14. 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

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- 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
	Soil Preparation and Fine Grading	AC
Bid Item LS-13-001 to LS-13-008: Tree, (Type), (Size)		
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

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

17.

- 6) Spraying for insect and disease control, as required
- 7) Maintaining trees
- 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
	Т	Tree, (Type), (Size)	EA
Bid Bid	Item I Item I	LS-14-001: Willow Brush Layering LS-14-002: Willow Bundles LS-14-003: Willow Fascines LS-14-004: Willow Stakes	
a.	yaro DR. ENO	e measurement for payment for this item w d, or linear foot of willow placed in accord AWINGS and SPECIFICATIONS or as of GINEER. The unit price will include all of ts. This BID item includes, but is not limit	ance with the therwise directed by the the CONTRACTOR's
	1) 2)	Furnishing, properly storing, preparing willows, biodegradable twine, and soil Furnishing and installing wood stakes t shown on the details, including cutting	for filling any voids o the dimensions
	3)	necessary Preparing subgrade, including scarifyin trenches	g, excavating, and
	4) 5)	Staking Providing all other related and necessar and materials to complete the WORK	y labor, equipment,
b.	Pay	ment will be based on units completed and	l accepted.
		Bid Item	Pay Unit
	V	Villow Brush Layering	SY
	V	Villow Bundles	EA
	V	Villow Fascines	LF
	V	Villow Stakes	EA
Bid	Item I	LS-15-001: Weed Control	

a. The measurement for payment for this item will be the actual number of days of weed control performed by the CONTRACTOR. The unit price will include all of the CONTRACTOR's costs. This BID item includes, but is not limited to:

- 1) Furnishing and transporting all equipment and materials required for weed control by means of mowing, spraying, removal, or similar.
- 2) Removing, hauling, and properly disposing of deleterious materials
- 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
Weed Control	DAY

18. Bid Item LS-16-001: Soil Testing

- 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) Providing all necessary labor, equipment, and materials for the acquisition of soil samples, submission soil samples for testing, payment of lab fees, and receipt of test results
 - 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.

	Bid Item	Pay Unit
Soil Testing		LS

Bid Item LS-17-001 Soil Amendment, Fertilizer Bid Item LS-17-002 Soil Amendment, Compost

- a. The measurement for payment for this item will be the actual number of acres that receive soil amendment 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, preparing, and placing soil amendments
 - 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.



RICT	Bid Item	Pay Unit
	Soil Amendment, Fertilizer	AC
	Soil Amendment, Compost	AC

N. UT – UTILITY

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

Bid Item	Pay Unit
Blow-off Assembly, X-Inch	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), X-Inch Diameter
 - 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, bends, tees, reducers, special fittings, jointing materials, valves, restraint, fasteners, concrete thrust blocks, 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), X-	
Inch Diameter	LF

- 4. Bid Item UT-04-001 to UT-04-004: Metal Pipe / Copper (Type K), X-Inch Diameter
 - 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, bends, tees, reducers, special fittings, jointing materials, valves, restraint, fasteners, concrete thrust blocks, 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 DRAWINGS, 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
Metal Pipe / Copper (Type K), X-Inch	
Diameter	LF

- 5. Bid Item UT-05-001 to UT-05-014: Plastic Pipe / High-density Polyethylene Pipe (HDPE), X-Inch Diameter
 - 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, bends, tees, reducers, special fittings, jointing materials, valves, restraint, fasteners, concrete thrust blocks, 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 DRAWINGS, 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), X-Inch Diameter	LF

- 6. Bid Item UT-06-001 to UT-06-014: Plastic Pipe / Poly Vinyl Chloride (PVC), X-Inch Diameter
 - c. 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, bends, tees, reducers, special fittings, jointing materials, valves, restraint, fasteners, concrete thrust blocks, 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 DRAWINGS, 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
- d. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Plastic Pipe / Poly Vinyl Chloride	
(PVC), X-Inch Diameter	LF

- Bid Item UT-07-001 to UT-07-010 Sanitary Sewer Manhole, (Type), (Size) Bit Item UT-07-011: 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:
 - 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, lining, 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.

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		Bid Item	Pay Unit
		Sanitary Sewer Manhole, (Type), (Size)	EA
		Sanitary Sewer Manhole, Adjust	VF
8.	Bid	Item UT-08-001: Utility Coordination	
all coordination pertaining t		The measurement for payment for this item will all coordination pertaining to existing utilities. T include all of the CONTRACTOR's costs. This I but is not limited to:	The unit price will
		1) Coordinating with the utility owner as new supporting, protecting, removing and relo	
		2) Scheduling all WORK	-
		3) Providing all other related and necessary and materials to complete the WORK	labor, equipment,
	b. Payment will be based on the percentage of completed and a WORK.		pleted and accepted
		Bid Item	Pay Unit
		Utility Coordination	LS
valve installed in accordance wit SPECIFICATIONS or as otherw unit price will include all of the 0		Item UT-09-001: Water Valve	
		The measurement for payment for this item will valve installed in accordance with the DRAWIN SPECIFICATIONS or as otherwise directed by unit price will include all of the CONTRACTOR item includes, but is not limited to:	IGS and the ENGINEER. The
		 Excavating backfilling and compacting Cutting pipe and dismantling joints Furnishing and installing water valve, val- extensions, flexible coupling, joint restrain manhole frame and cover, access hatch, p manhole/vault that is not included in other indicated on the DRAWINGS. 	nts, manhole/vault, ipe inside the r bid items, as
		4) Testing as called for on the DRAWINGS	and

- 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.

	Bid Item	Pay Unit
	Water Valve	EA
PART 2	PRODUCTS (NOT APPLICABLE)	
PART 3	EXECUTION (NOT APPLICABLE)	
	END OF SECTION	