



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

August 05, 2022

Addendum No. 1

RE: Contract # C204731

WBS # 32572.3.13

FEDERAL-AID NO. 0129007

Graham County (A-0009CA)

US-129 FROM SOUTH OF SR-1275 (FIVE POINTS RD) TO NC-143 AND NC-143
FROM US-129 TO SR-1223 (BEECH CREEK RD)

August 16, 2022 Letting

To Whom It May Concern:

Reference is made to the proposal form furnished to you on this project.

The following revisions have been made to the proposal.

Page No.	Revision
Proposal Cover	Note added that reads "Includes Addendum No. 1 Dated 08-05-2022".
GT-2.2	The Unit Project Special Provision entitled SIMULATED STONE FORM LINER FINISH (3.0 Material Requirements) has been revised.
TS-2	Table of Contents for the Unit Project Special Provision entitled TRAFFIC SIGNALS was revised to add METAL POLE REMOVALS
TS-45 thru TS-51	Special provision for METAL POLE REMOVALS was added

Please void the above listed Pages in your proposal and staple the revised Pages thereto.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
CONTRACT STANDARDS AND DEVELOPMENT
1591 MAIL SERVICE CENTER
RALEIGH, NC 27699-1591

Telephone: (919) 707-6900
Fax: (919) 250-4127
Customer Service: 1-877-368-4968

Location:
1020 BIRCH RIDGE DR.
RALEIGH, NC 27610

Website: www.ncdot.gov

On the item sheets the following pay item revisions have been made:

<u>Item</u>	<u>Description</u>	<u>Old Quantity</u>	<u>New Quantity</u>
0307-7960000000-N- SP	METAL POLE FOUNDATION REMOVAL	NEW ITEM	2 EA
0308-7972000000-N- SP	METAL POLE REMOVAL	NEW ITEM	2 EA

The Contractor's bid must include these pay item revisions.

The electronic bidding file has been updated to reflect these revisions. Please download the Addendum File and follow the instructions for applying the addendum. Bid Express will not accept your bid unless the addendum has been applied.

The contract will be prepared accordingly.

Sincerely,

DocuSigned by:

 F81B6038A47A442...
 Ronald E. Davenport, Jr., PE
 State Contract Officer

RED/jjr

Attachments

cc: Mr. Boyd Tharrington, PE
 Ms. Wanda Austin, PE
 Mr. Jon Weathersbee, PE
 Mr. Ken Kennedy, PE
 Project File (2)

Mr. Forrest Dungan, PE
 Ms. Jaci Kincaid
 Mr. Kyle Kempf
 Ms. Lori Strickland
 Mr. Mike Gwyn
 Ms. Penny Higgins

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH, N.C.

PROPOSAL

INCLUDES ADDENDUM No.1 DATED 08-05-2022

DATE AND TIME OF BID OPENING: **Aug 16, 2022 AT 02:00 PM**

CONTRACT ID C204731

WBS 32572.3.13

FEDERAL-AID NO. 0129007

COUNTY GRAHAM

T.I.P NO. A-0009CA

MILES 3.727

ROUTE NO.

LOCATION US-129 FROM SOUTH OF SR-1275 (FIVE POINTS RD) TO NC-143 AND NC-143 FROM US-129 TO SR-1223 (BEECH CREEK RD).

TYPE OF WORK GRADING, DRAINAGE, AND PAVING.

NOTICE:

ALL BIDDERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE BIDDER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. BIDDERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOTWITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY FEDERAL - AID FUNDED PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING.

BIDS WILL BE RECEIVED AS SHOWN BELOW:

THIS IS A ROADWAY PROPOSAL

5% BID BOND OR BID DEPOSIT REQUIRED

to the Department.

Architectural surface treatments and patterns of the finished work shall achieve the same final effect as demonstrated on the accepted sample panel(s). Upon acceptance by the Engineer, the sample panel(s) shall be used as the quality standard for the project. After the acceptance of the completed structure, the Contractor shall dispose of the sample panels as directed by the Engineer. The sample panel will also include a sample of the stain used for the Precast Reinforced Concrete Barrier – Single Faced (Stained).

3.0 MATERIAL REQUIREMENTS

Form Liner - The form liner shall be a high quality, re-useable product manufactured of high strength urethane rubber or other approved material which attaches easily to the form work system and shall not compress more than $\frac{1}{4}$ in when concrete is poured at a rate of 10 vertical feet per hour. The form liners shall be removable without causing deterioration of the surface or underlying concrete.

The Contractor is required to use the same source of form liner for all required elements. The architectural concrete surface treatment should match the appearance (stone size and shape, stone texture, pattern, color, and relief) of dry stacked natural stone to resemble a pattern similar to the pattern shown below. Multiple colors are required for the pattern.



All texture is to be in addition to the nominal thickness of each element within tolerances. Relief of any texture is to have a minimum depth of $\frac{1}{2}$ inch, a maximum depth of 4 inches, and an average of $2\frac{1}{2}$ inches.

The form liners are to be patterned as referenced above and as directed by the Engineer.

The Contractor may choose one of the following manufactures to supply the stone-textured surface treatment as specified above. One form liner pattern will be used on this project.

Hunt Valley Distributors, LLC
3705 Crondall Lane
Owings Mills, MD 21117
410.356.9677

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6.3. METAL POLE REMOVALS

A. Description:

Remove and dispose of existing metal support poles, and remove and dispose of existing foundations, associated anchor bolts, electrical wires and connections.

B. Construction Methods:

Foundations:

Remove and promptly dispose of the metal support pole foundations including reinforcing steel, electrical wires, and anchor bolts to a minimum depth of 2 feet below the finished ground elevation. At the Contractor’s option, remove the complete foundation.

Metal Poles:

Consult Division Traffic Services regarding ownership of poles. If the Division chooses to maintain these structures in their inventory for future use, permanently mark the pole with the signal inventory number, asset inventory number or some identifying information that identifies where the pole came from

Remove the metal support poles, and promptly transport the metal support poles from the project. Use methods to remove the metal support poles and attached equipment that will not result in damage to other portions of the project or facility. Repair damages that are a result of the Contractor's actions at no additional cost to the Department.

Transport and properly dispose of the materials.

Backfill and compact disturbed areas to match the finished ground elevation. Seed unpaved areas.

Use methods to remove the foundations that will not result in damage to other portions of the project or facility. Repair damages that are a result of the Contractor's actions at no cost to the Department.

6.4. POLE NUMBERING SYSTEM-NEW POLES

Attach an identification tag to each pole shaft section as shown on Metal Pole Standard Sheet M2 “Typical Fabrication Details for All Metal Poles.”

6.5. MEASUREMENT AND PAYMENT

Actual number of metal poles with single mast arms furnished, installed, and accepted.

Actual number of metal poles with single mast arms and luminaire arms furnished, installed, and accepted.

Actual number of metal poles with dual mast arms furnished, installed, and accepted.

Actual number of designs for mast arms with metal poles furnished and accepted.

Actual number of metal signal pole foundations removed and disposed.

Actual number of metal signal poles removed and disposed.

Actual number of soil tests with SPT borings drilled furnished and accepted.

Actual volume of concrete poured in cubic yards of drilled pier foundation furnished, installed and accepted.

No measurement will be made for foundation designs prepared with metal pole designs, as these will be considered incidental to designing Traffic Signal , CCTV or MVD support structures.

Payment will be made under:

Metal Pole with Single Mast ArmEach

Metal Pole with Single Mast Arm/Luminaire Arm	Each
Metal Pole with Dual Mast Arm.....	Each
Mast Arm with Metal Pole Design	Each
Metal Pole Foundation Removal	Each
Metal Pole Removal.....	Each
Soil Test	Each
Drilled Pier Foundation.....	Cubic Yard

7. ETHERNET EDGE SWITCH

Furnish and install a managed Ethernet edge switch as specified below that is fully compatible, interoperable, and completely interchangeable and functional within the existing City or Division traffic signal system communications network.

7.1. DESCRIPTION

A. Ethernet Edge Switch:

Furnish and install a hardened, field Ethernet edge switch (hereafter “edge switch”) for traffic signal controllers as specified below. Ensure that the edge switch provides wire-speed, fast Ethernet connectivity at transmission rates of 100 megabits per second from each remote ITS device location to the routing switches.

Contact the City or Division to arrange for the programming of the new Field Ethernet Switches with the necessary network configuration data, including but not limited to, the Project IP Address, Default Gateway, Subnet Mask and VLAN ID information. Provide a minimum five (5) days working notice to allow the City or Division to program the new devices.

B. Network Management:

Ensure that the edge switch is fully compatible with the City’s or Division’s existing Network Management Software.

7.2. MATERIALS

A. General:

Ensure that the edge switch is fully compatible and interoperable with the trunk Ethernet network interface and that the edge switch supports half and full duplex Ethernet communications.

Furnish an edge switch that provide 99.999% error-free operation, and that complies with the Electronic Industries Alliance (EIA) Ethernet data communication requirements using single-mode fiber-optic transmission medium and copper transmission medium. Ensure that the edge switch has a minimum mean time between failures (MTBF) of 10 years, or 87,600 hours, as calculated using the Bellcore/Telcordia SR-332 standard for reliability prediction.

B. Compatibility Acceptance

The Engineer has the authority to require the Contractor to submit a sample Field Ethernet Switch and Field Ethernet Transceiver along with all supporting documentation, software and testing procedures to allow a compatibility acceptance test be performed prior to approving the proposed Field Ethernet Switch and Field Ethernet Transceiver for deployment. **The Compatibility Acceptance testing will ensure that the proposed device is 100% compatible and interoperable with the existing City Signal System network, monitoring software and Traffic Operations**

Center network hardware. Allow fifteen (15) working days for the Compatibility Acceptance Testing to be performed

C. Standards:

Ensure that the edge switch complies with all applicable IEEE networking standards for Ethernet communications, including but not limited to:

- IEEE 802.1D standard for media access control (MAC) bridges used with the Spanning Tree Protocol (STP);
- IEEE 802.1Q standard for port-based virtual local area networks (VLANs);
- IEEE 802.1P standard for Quality of Service (QoS);
- IEEE 802.1w standard for MAC bridges used with the Rapid Spanning Tree Protocol (RSTP);
- IEEE 802.1s standard for MAC bridges used with the Multiple Spanning Tree Protocol;
- IEEE 802.1x standard for port based network access control, including RADIUS;
- IEEE 802.3 standard for local area network (LAN) and metropolitan area network (MAN) access and physical layer specifications;
- IEEE 802.3u supplement standard regarding 100 Base TX/100 Base FX;
- IEEE 802.3x standard regarding flow control with full duplex operation; and
- IFC 2236 regarding IGMP v2 compliance.

- IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
- IEEE 802.3ad Ethernet Link Aggregation
- IEEE 802.3i for 10BASE-T (10 Mbit/s over Fiber-Optic)
- IEEE 802.3ab for 1000BASE-T (1Gbit/s over Ethernet)
- IEEE 802.3z for 1000BASE-X (1 Gbit/s Ethernet over Fiber-Optic)

D. Functional:

Ensure that the edge switch supports all Layer 2 management features and certain Layer 3 features related to multicast data transmission and routing. These features shall include, but not be limited to:

- An STP healing/convergence rate that meets or exceeds specifications published in the IEEE 802.1D standard.
- An RSTP healing/convergence rate that meets or exceeds specifications published in the IEEE 802.1w standard.
- An Ethernet edge switch that is a port-based VLAN and supports VLAN tagging that meets or exceeds specifications as published in the IEEE 802.1Q standard, and has a minimum 4-kilobit VLAN address table (254 simultaneous).
- A forwarding/filtering rate that is a minimum of 14,880 packets per second for 10 megabits per second and 148,800 packets per second for 100 megabits per second.
- A minimum 4-kilobit MAC address table.
- Support of Traffic Class Expediting and Dynamic Multicast Filtering.
- Support of, at a minimum, snooping of Version 2 & 3 of the Internet Group Management Protocol (IGMP).
- Support of remote and local setup and management via telnet or secure Web-based GUI and command line interfaces.

- Support of the Simple Network Management Protocol version 3 (SNMPv3). Verify that the Ethernet edge switch can be accessed using the resident EIA-232 management port, a telecommunication network, or the Trivial File Transfer Protocol (TFTP).
- Port security through controlling access by the users. Ensure that the Ethernet edge switch has the capability to generate an alarm and shut down ports when an unauthorized user accesses the network.
- Support of remote monitoring (RMON-1 & RMON-2) of the Ethernet agent.
- Support of the TFTP and SNTP. Ensure that the Ethernet edge switch supports port mirroring for troubleshooting purposes when combined with a network analyzer.

E. Physical Features:

Ports: Provide 10/100/1000 Mbps auto-negotiating ports (RJ-45) copper Fast Ethernet ports for all edge switches. Provide auto-negotiation circuitry that will automatically negotiate the highest possible data rate and duplex operation possible with attached devices supporting the IEEE 802.3 Clause 28 auto-negotiation standard.

Optical Ports: Ensure that all fiber-optic link ports operate at 1310 or 1550 nanometers in single mode. Provide Type LC connectors for the optical ports, as specified in the Plans or by the Engineer. Do not use mechanical transfer registered jack (MTRJ) type connectors.

Provide an edge switch having a minimum of two optical 100/1000 Base X ports capable of transmitting data at 100/1000 megabits per second. Ensure that each optical port consists of a pair of fibers; one fiber will transmit (TX) data and one fiber will receive (RX) data. Ensure that the optical ports have an optical power budget of at least 15 db.

Copper Ports: Provide an edge switch that includes a minimum of four copper ports. Provide Type RJ-45 copper ports and that auto-negotiate speed (i.e., 10/100/1000 Base) and duplex (i.e., full or half). Ensure that all 10/100/1000 Base TX ports meet the specifications detailed in this section and are compliant with the IEEE 802.3 standard pinouts. Ensure that all Category 5E unshielded twisted pair/shielded twisted pair network cables are compliant with the EIA/TIA-568-B standard.

Port Security: Ensure that the edge switch supports/complies with the following (remotely) minimum requirements:

- Ability to configure static MAC addresses access;
- Ability to disable automatic address learning per ports; know hereafter as Secure Port. Secure Ports only forward; and
- Trap and alarm upon any unauthorized MAC address and shutdown for programmable duration. Port shutdown requires administrator to manually reset the port before communications are allowed.

F. Management Capabilities:

Ensure that the edge switch supports all Layer 2 management features and certain Layer 3 features related to multicast data transmission and routing. These features shall include, but not be limited to:

- An STP healing/convergence rate that meets or exceeds specifications published in the IEEE 802.1 D standards;
- An RSTP healing/convergence rate that meets or exceeds specifications published in the IEEE 802.1w standard;

- An Ethernet edge switch that is a port-based VLAN and supports VLAN tagging that meets or exceeds specifications as published in the IEEE 802.1Q standard, and has a minimum 4-kilobit VLAN address table (254 simultaneous);
- A forwarding/filtering rate that is a minimum of 14,880 packets per second for 10 megabits per second, 148,800 packets per second for 100 megabits per second and 1,488,000 packets per second for 1000 megabits per second;
- A minimum 4-kilobit MAC address table;
- Support of Traffic Class Expediting and Dynamic Multicast Filtering.
- Support of, at a minimum, snooping of Version 2 & 3 of the Internet Group Management Protocol (IGMP);
- Support of remote and local setup and management via telnet or secure Web-based GUI and command line interfaces; and
- Support of the Simple Network Management Protocol (SNMP). Verify that the Ethernet edge switch can be accessed using the resident EIA-232 management port, a telecommunication network, or the Trivial File Transfer Protocol (TFTP).

Network Capabilities: Provide an edge switch that supports/complies with the following minimum requirements:

- Provide full implementation of IGMPv2 snooping (RFC 2236);
- Provide full implementation of SNMPv1, SNMPv2c, and/or SNMPv3;
- Provide support for the following RMON-I groups, at a minimum:
 - Part 1: Statistics
 - Part 2: History
 - Part 3: Alarm
 - Part 9: Event
- Provide support for the following RMON-2 groups, at a minimum:
 - Part 13: Address Map
 - Part 16: Layer Host
 - Part 17: Layer Matrix
 - Part 18: User History
- Capable of mirroring any port to any other port within the switch;
- Meet the IEEE 802.1Q (VLAN) standard per port for up to four VLANs;
- Meet the IEEE 802.3ad (Port Trunking) standard for a minimum of two groups of four ports;
- Password manageable;
- Telnet/CLI;
- HTTP (Embedded Web Server) with Secure Sockets Layer (SSL); and
- Full implementation of RFC 783 (TFTP) to allow remote firmware upgrades.

Network Security: Provide an edge switch that supports/complies with the following (remotely) minimum network security requirements:

- Multi-level user passwords;
- RADIUS centralized password management (IEEE 802.1X);
- SNMPv3 encrypted authentication and access security;
- Port security through controlling access by the users: ensure that the Ethernet edge switch has the capability to generate an alarm and shut down ports when an unauthorized user accesses the network;
- Support of remote monitoring (RMON-1&2) of the Ethernet agent; and

- Support of the TFTP and SNMP. Ensure that the Ethernet edge switch supports port mirroring for troubleshooting purposes when combined with a network analyzer.

G. Electrical Specifications:

Ensure that the edge switch operates and power is supplied with 115 volts of alternating current (VAC). Ensure that the edge switch has a minimum operating input of 110 VAC and a maximum operating input of 130 VAC. Ensure that if the device requires operating voltages other than 120 VAC, supply the required voltage converter. Ensure that the maximum power consumption does not exceed 50 watts. Ensure that the edge switch has diagnostic light emitting diodes (LEDs), including link, TX, RX, speed (for Category 5E ports only), and power LEDs.

H. Environmental Specifications:

Ensure that the edge switch performs all of the required functions during and after being subjected to an ambient operating temperature range of -30 degrees to 165 degrees Fahrenheit as defined in the environmental requirements section of the NEMA TS 2 standard, with a noncondensing humidity of 0 to 95%.

Provide certification that the device has successfully completed environmental testing as defined in the environmental requirements section of the NEMA TS 2 standard. Provide certification that the device meets the vibration and shock resistance requirements of Sections 2.1.9 and 2.1.10, respectively, of the NEMA TS 2 standard. Ensure that the edge switch is protected from rain, dust, corrosive elements, and typical conditions found in a roadside environment.

The edge switch shall meet or exceed the following environmental standards:

- IEEE 1613 (electric utility substations)
- IEC 61850-3 (electric utility substations)
- IEEE 61800-3 (variable speed drive systems)
- IEC 61000-6-2 (generic industrial)
- EMF – FCC Part 15 CISPR (EN5502) Class A

I. Ethernet Patch Cable:

Furnish a factory pre-terminated/pre-connectorized Ethernet patch cable with each edge switch. Furnish Ethernet patch cables meeting the following physical requirements:

- Five (5)-foot length
- Category 5e or better
- Factory-installed RJ-45 connectors on both ends
- Molded anti-snap hoods over connectors
- Gold plated connectors

Furnish Fast Ethernet patch cords meeting the following minimum performance requirements:

- TIA/EIA-568-B-5, Additional Transmission Performance Specifications for 4-pair 100 Ω Enhanced Category 5 Cabling
- Frequency Range: 1-100 MHz
- Near-End Crosstalk (NEXT): 30.1 dB
- Power-sum NEXT: 27.1 dB
- Attenuation to Crosstalk Ratio (ACR): 6.1 dB
- Power-sum ACR: 3.1 dB

- Return Loss: 10dB
- Propagation Delay: 548 nsec

7.3. CONSTRUCTION METHODS

A. General:

Ensure that the edge switch is UL listed.

Verify that network/field/data patch cords meet all ANSI/EIA/TIA requirements for Category 5E and Category 6 four-pair unshielded twisted pair cabling with stranded conductors and RJ45 connectors.

Contact the Signal Shop a minimum of 5 days prior to installation for the most current edge switch IP Address, VLAN, subnet mask, default gateway and configuration files.

B. Edge Switch:

Mount the edge switch inside each field cabinet by securely fastening the edge switch to the upper end of the right rear vertical rail of the equipment rack using manufacturer-recommended or Engineer-approved attachment methods, attachment hardware and fasteners.

Ensure that the edge switch is mounted securely in the cabinet and is fully accessible by field technicians without blocking access to other equipment. Verify that fiber-optic jumpers consist of a length of cable that has connectors on both ends, primarily used for interconnecting termination or patching facilities and/or equipment.

7.4. MEASURMENT AND PAYMENT

Ethernet edge switch will be measured and paid as the actual number of Ethernet edge switches furnished, installed, and accepted.

No separate measurement will be made for Ethernet patch cable, power cord, mounting hardware, nuts, bolts, brackets, or edge switch programming as these will be considered incidental to furnishing and installing the edge switch.

Payment will be made under:

Ethernet Edge Switch.....Each

County: GRAHAM

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
ROADWAY ITEMS						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0000400000-N	801	CONSTRUCTION SURVEYING	Lump Sum	L.S.	
0003	0001000000-E	200	CLEARING & GRUBBING .. ACRE(S)	Lump Sum	L.S.	
0004	0008000000-E	200	SUPPLEMENTARY CLEARING & GRUBBING	1 ACR		
0005	0015000000-N	205	SEALING ABANDONED WELLS	3 EA		
0006	0022000000-E	225	UNCLASSIFIED EXCAVATION	84,000 CY		
0007	0036000000-E	225	UNDERCUT EXCAVATION	12,500 CY		
0008	0106000000-E	230	BORROW EXCAVATION	44,000 CY		
0009	0134000000-E	240	DRAINAGE DITCH EXCAVATION	1,370 CY		
0010	0141000000-E	240	BERM DITCH CONSTRUCTION	960 LF		
0011	0156000000-E	250	REMOVAL OF EXISTING ASPHALT PAVEMENT	8,030 SY		
0012	0194000000-E	265	SELECT GRANULAR MATERIAL, CLASS III	13,500 CY		
0013	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZATION	19,600 SY		
0014	0199000000-E	SP	TEMPORARY SHORING	1,200 SF		
0015	0223000000-E	275	ROCK PLATING	4,240 SY		
0016	0234000000-E	SP	GENERIC GRADING ITEM UNDERCUT EXCAVATION FOR TOE SHEAR KEY	3,850 CY		
0017	0241000000-E	SP	GENERIC GRADING ITEM GEOTEXTILE FOR GABION EROSION PROTECTION	1,600 SY		

County: GRAHAM

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0018	0241000000-E	SP	GENERIC GRADING ITEM GEOTEXTILE FOR ROCK FILL	1,000 SY		
0019	0241000000-E	SP	GENERIC GRADING ITEM GEOTEXTILE FOR TOE SHEAR KEY	2,700 SY		
0020	0255000000-E	SP	GENERIC GRADING ITEM HAULING AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL	50 TON		
0021	0255000000-E	SP	GENERIC GRADING ITEM ROCK FILL FOR EMBANKMENT STABILIZATION	2,000 TON		
0022	0255000000-E	SP	GENERIC GRADING ITEM SELECT MATERIAL, CLASS VI FOR ROCK FILL	500 TON		
0023	0255000000-E	SP	GENERIC GRADING ITEM SELECT MATERIAL, CLASS VI FOR TOE SHEAR KEY	1,100 TON		
0024	0255000000-E	SP	GENERIC GRADING ITEM SELECT MATERIAL, CLASS VII FOR TOE SHEAR KEY	6,750 TON		
0025	0318000000-E	300	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES	2,730 TON		
0026	0320000000-E	300	FOUNDATION CONDITIONING GEOTEXTILE	8,480 SY		
0027	0335100000-E	305	12" DRAINAGE PIPE	44 LF		
0028	0335400000-E	305	24" DRAINAGE PIPE	256 LF		
0029	0335500000-E	305	30" DRAINAGE PIPE	360 LF		
0030	0343000000-E	310	15" SIDE DRAIN PIPE	520 LF		
0031	0344000000-E	310	18" SIDE DRAIN PIPE	180 LF		
0032	0345000000-E	310	24" SIDE DRAIN PIPE	44 LF		
0033	0366000000-E	310	15" RC PIPE CULVERTS, CLASS III	24 LF		

County: GRAHAM

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0034	0372000000-E	310	18" RC PIPE CULVERTS, CLASS III	340 LF		
0035	0378000000-E	310	24" RC PIPE CULVERTS, CLASS III	516 LF		
0036	0384000000-E	310	30" RC PIPE CULVERTS, CLASS III	960 LF		
0037	0390000000-E	310	36" RC PIPE CULVERTS, CLASS III	628 LF		
0038	0402000000-E	310	48" RC PIPE CULVERTS, CLASS III	212 LF		
0039	0408000000-E	310	54" RC PIPE CULVERTS, CLASS III	92 LF		
0040	0414000000-E	310	60" RC PIPE CULVERTS, CLASS III	120 LF		
0041	0448000000-E	310	***** RC PIPE CULVERTS, CLASS IV (48")	92 LF		
0042	0448000000-E	310	***** RC PIPE CULVERTS, CLASS IV (60")	72 LF		
0043	0448200000-E	310	15" RC PIPE CULVERTS, CLASS IV	5,256 LF		
0044	0448300000-E	310	18" RC PIPE CULVERTS, CLASS IV	824 LF		
0045	0448400000-E	310	24" RC PIPE CULVERTS, CLASS IV	476 LF		
0046	0448500000-E	310	30" RC PIPE CULVERTS, CLASS IV	540 LF		
0047	0448600000-E	310	36" RC PIPE CULVERTS, CLASS IV	84 LF		
0048	0576000000-E	310	*** CS PIPE CULVERTS, ***** THICK (36", 0.079")	44 LF		
0049	0576000000-E	310	*** CS PIPE CULVERTS, ***** THICK (48", 0.109")	40 LF		
0050	0576000000-E	310	*** CS PIPE CULVERTS, ***** THICK (54", 0.109")	32 LF		

County: GRAHAM

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0051	0576000000-E	310	*** CS PIPE CULVERTS, ***** THICK (60", 0.138")	16 LF		
0052	0576000000-E	310	*** CS PIPE CULVERTS, ***** THICK (66", 0.138")	72 LF		
0053	0576000000-E	310	*** CS PIPE CULVERTS, ***** THICK (96", 0.168")	96 LF		
0054	0582000000-E	310	15" CS PIPE CULVERTS, 0.064" THICK	1,336 LF		
0055	0588000000-E	310	18" CS PIPE CULVERTS, 0.064" THICK	432 LF		
0056	0594000000-E	310	24" CS PIPE CULVERTS, 0.064" THICK	216 LF		
0057	0600000000-E	310	30" CS PIPE CULVERTS, 0.079" THICK	460 LF		
0058	0636000000-E	310	*** CS PIPE ELBOWS, ***** THICK (15", 0.064")	45 EA		
0059	0636000000-E	310	*** CS PIPE ELBOWS, ***** THICK (18", 0.064")	5 EA		
0060	0636000000-E	310	*** CS PIPE ELBOWS, ***** THICK (24", 0.064")	5 EA		
0061	0636000000-E	310	*** CS PIPE ELBOWS, ***** THICK (30", 0.079")	4 EA		
0062	0654000000-E	310	**** X **** CS PIPE ARCH CULVERTS, ***** THICK (103" X 71", 0.109")	140 LF		
0063	0973100000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B IN SOIL (24", 0.500")	48 LF		
0064	0973100000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B IN SOIL (30", 0.500")	262 LF		
0065	0973100000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B IN SOIL (36", 0.500")	80 LF		
0066	0973100000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B IN SOIL (54", 0.750")	90 LF		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0067	0973100000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B IN SOIL (66", 0.875")	66 LF		
0068	0973300000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B NOT IN SOIL (24", 0.500")	48 LF		
0069	0973300000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B NOT IN SOIL (30", 0.500")	262 LF		
0070	0973300000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B NOT IN SOIL (36", 0.500")	80 LF		
0071	0973300000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B NOT IN SOIL (54", 0.750")	90 LF		
0072	0973300000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B NOT IN SOIL (66", 0.875")	66 LF		
0073	0986000000-E	SP	GENERIC PIPE ITEM 6" DI PIPE CULVERTS (SPRING BOX)	68 LF		
0074	0986000000-E	SP	GENERIC PIPE ITEM 6" PVC PIPE CULVERTS (SPRING BOX)	12 LF		
0075	0995000000-E	340	PIPE REMOVAL	4,177 LF		
0076	1011000000-N	500	FINE GRADING	Lump Sum	L.S.	
0077	1099500000-E	505	SHALLOW UNDERCUT	1,000 CY		
0078	1099700000-E	505	CLASS IV SUBGRADE STABILIZATION	7,800 TON		
0079	1110000000-E	510	STABILIZER AGGREGATE	600 TON		
0080	1115000000-E	SP	GEOTEXTILE FOR PAVEMENT STABILIZATION	13,400 SY		
0081	1121000000-E	520	AGGREGATE BASE COURSE	3,895 TON		
0082	1220000000-E	545	INCIDENTAL STONE BASE	8,000 TON		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0083	1308000000-E	607	MILLING ASPHALT PAVEMENT, **** TO ***** (0" TO 1-1/2")	1,825 SY		
0084	1308000000-E	607	MILLING ASPHALT PAVEMENT, **** TO ***** (0" TO 3")	8,000 SY		
0085	1330000000-E	607	INCIDENTAL MILLING	1,000 SY		
0086	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	16,500 TON		
0087	1503000000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	14,900 TON		
0088	1523000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	26,800 TON		
0089	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	3,000 TON		
0090	1693000000-E	654	ASPHALT PLANT MIX, PAVEMENT REPAIR	6,000 TON		
0091	2022000000-E	815	SUBDRAIN EXCAVATION	560 CY		
0092	2026000000-E	815	GEOTEXTILE FOR SUBSURFACE DRAINS	2,500 SY		
0093	2036000000-E	815	SUBDRAIN COARSE AGGREGATE	420 CY		
0094	2044000000-E	815	6" PERFORATED SUBDRAIN PIPE	2,500 LF		
0095	2070000000-N	815	SUBDRAIN PIPE OUTLET	5 EA		
0096	2077000000-E	815	6" OUTLET PIPE	30 LF		
0097	2209000000-E	838	ENDWALLS	32.9 CY		
0098	2220000000-E	838	REINFORCED ENDWALLS	58.9 CY		
0099	2253000000-E	840	PIPE COLLARS	0.893 CY		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0100	2264000000-E	840	PIPE PLUGS	4.481 CY		
0101	2275000000-E	SP	FLOWABLE FILL	223 CY		
0102	2286000000-N	840	MASONRY DRAINAGE STRUCTURES	171 EA		
0103	2297000000-E	840	MASONRY DRAINAGE STRUCTURES	16.084 CY		
0104	2308000000-E	840	MASONRY DRAINAGE STRUCTURES	132.3 LF		
0105	2364000000-N	840	FRAME WITH TWO GRATES, STD 840.16	1 EA		
0106	2364200000-N	840	FRAME WITH TWO GRATES, STD 840.20	52 EA		
0107	2365000000-N	840	FRAME WITH TWO GRATES, STD 840.22	36 EA		
0108	2366000000-N	840	FRAME WITH TWO GRATES, STD 840.24	7 EA		
0109	2367000000-N	840	FRAME WITH TWO GRATES, STD 840.29	2 EA		
0110	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)	4 EA		
0111	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)	19 EA		
0112	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)	19 EA		
0113	2396000000-N	840	FRAME WITH COVER, STD 840.54	25 EA		
0114	2451000000-N	852	CONCRETE TRANSITIONAL SECTION FOR DROP INLET	2 EA		
0115	2473000000-N	SP	GENERIC DRAINAGE ITEM DE-WATERING	3 EA		
0116	2484000000-E	SP	GENERIC DRAINAGE ITEM 18" PIPE REHABILITATION CIPP LINER	240 LF		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0117	2484000000-E	SP	GENERIC DRAINAGE ITEM 54" PIPE REHABILITATION CIPP LINER	148 LF		
0118	2484000000-E	SP	GENERIC DRAINAGE ITEM PRE-INSTALLATION INSPECTION	388 LF		
0119	2535000000-E	846	*** X *** CONCRETE CURB (8" X 12")	300 LF		
0120	2542000000-E	846	1'-6" CONCRETE CURB & GUTTER	100 LF		
0121	2549000000-E	846	2'-6" CONCRETE CURB & GUTTER	6,750 LF		
0122	2556000000-E	846	SHOULDER BERM GUTTER	5,725 LF		
0123	2577000000-E	846	CONCRETE EXPRESSWAY GUTTER	1,475 LF		
0124	2591000000-E	848	4" CONCRETE SIDEWALK	2,400 SY		
0125	2605000000-N	848	CONCRETE CURB RAMPS	41 EA		
0126	2612000000-E	848	6" CONCRETE DRIVEWAY	790 SY		
0127	2619000000-E	850	4" CONCRETE PAVED DITCH	160 SY		
0128	2647000000-E	852	5" MONOLITHIC CONCRETE ISLANDS (SURFACE MOUNTED)	80 SY		
0129	2724000000-E	857	PRECAST REINFORCED CONCRETE BARRIER, SINGLE FACED	130 LF		
0130	2752000000-E	SP	GENERIC PAVING ITEM PRECAST REINFORCED CONCRETE BARRIER - SINGLE FACED (STAINED)	530 LF		
0131	2875000000-N	859	CONVERT EXISTING CATCH BASIN TO DROP INLET	1 EA		
0132	3030000000-E	862	STEEL BEAM GUARDRAIL	13,675 LF		
0133	3045000000-E	862	STEEL BEAM GUARDRAIL, SHOP CURVED	550 LF		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0134	3145000000-E	862	EXTRA LENGTH GUARDRAIL POST (** STEEL) (8')	80 EA		
0135	3150000000-N	862	ADDITIONAL GUARDRAIL POSTS	10 EA		
0136	3195000000-N	862	GUARDRAIL END UNITS, TYPE AT-1	4 EA		
0137	3287000000-N	SP	GUARDRAIL END UNITS, TYPE TL-3	55 EA		
0138	3288000000-N	SP	GUARDRAIL END UNITS, TYPE TL-2	5 EA		
0139	3317000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE B- 77	3 EA		
0140	3345000000-E	864	REMOVE & RESET EXISTING GUARDRAIL	262.5 LF		
0141	3360000000-E	863	REMOVE EXISTING GUARDRAIL	15,030 LF		
0142	3380000000-E	862	TEMPORARY STEEL BEAM GUARDRAIL	1,900 LF		
0143	3382000000-E	862	TEMPORARY STEEL BEAM GUARDRAIL (SHOP CURVED)	312.5 LF		
0144	3389150000-N	SP	TEMPORARY GUARDRAIL END UNITS, TYPE ***** (TL-2)	2 EA		
0145	3389150000-N	SP	TEMPORARY GUARDRAIL END UNITS, TYPE ***** (TL-3)	9 EA		
0146	3566000000-E	867	WOVEN WIRE FENCE RESET	1,000 LF		
0147	3575000000-E	SP	GENERIC FENCING ITEM BLACK VINYL COATED CHAIN LINK FENCE, 48" FABRIC	899 LF		
0148	3575000000-E	SP	GENERIC FENCING ITEM BLACK VINYL COATED CHAIN LINK FENCE, 72" FABRIC	683 LF		
0149	3575000000-E	SP	GENERIC FENCING ITEM STEEL PIPE HANDRAIL	365 LF		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0150	3578000000-N	SP	GENERIC FENCING ITEM BLACK VINYL COATED DOUBLE GATES, 72" HIGH, 8' WIDE, 16' OPENING	2 EA		
0151	3578000000-N	SP	GENERIC FENCING ITEM BLACK VINYL COATED METAL GATE POST FOR 72" CHAIN LINK FENCE, DOUBLE GATE	4 EA		
0152	3578000000-N	SP	GENERIC FENCING ITEM BLACK VINYL COATED METAL LINE POST FOR 48" CHAIN LINK FENCE	93 EA		
0153	3578000000-N	SP	GENERIC FENCING ITEM BLACK VINYL COATED METAL LINE POST FOR 72" CHAIN LINK FENCE	73 EA		
0154	3578000000-N	SP	GENERIC FENCING ITEM BLACK VINYL COATED METAL TERMINAL POST FOR 48" CHAIN LINK FENCE	120 EA		
0155	3578000000-N	SP	GENERIC FENCING ITEM BLACK VINYL COATED METAL TERMINAL POST FOR 72" CHAIN LINK FENCE	92 EA		
0156	3628000000-E	876	RIP RAP, CLASS I	1,930 TON		
0157	3635000000-E	876	RIP RAP, CLASS II	2,000 TON		
0158	3642000000-E	876	RIP RAP, CLASS A	850 TON		
0159	3649000000-E	876	RIP RAP, CLASS B	1,060 TON		
0160	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	7,100 SY		
0161	3678000000-E	SP	GENERIC EROSION CONTROL ITEM GABION EROSION PROTECTION	16,400 SF		
0162	4072000000-E	903	SUPPORTS, 3-LB STEEL U-CHANNEL	1,600 LF		
0163	4096000000-N	904	SIGN ERECTION, TYPE D	18 EA		
0164	4102000000-N	904	SIGN ERECTION, TYPE E	61 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0165	4108000000-N	904	SIGN ERECTION, TYPE F	7 EA		
0166	4116100000-N	904	SIGN ERECTION, RELOCATE TYPE **** (GROUND MOUNTED) (D)	4 EA		
0167	4116100000-N	904	SIGN ERECTION, RELOCATE TYPE **** (GROUND MOUNTED) (E)	1 EA		
0168	4155000000-N	907	DISPOSAL OF SIGN SYSTEM, U- CHANNEL	58 EA		
0169	4192000000-N	907	DISPOSAL OF SUPPORT, U-CHANNEL	4 EA		
0170	4238000000-N	907	DISPOSAL OF SIGN, D, E OR F	4 EA		
0171	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	368 SF		
0172	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	400 SF		
0173	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	236 SF		
0174	4430000000-N	1130	DRUMS	1,350 EA		
0175	4435000000-N	1135	CONES	150 EA		
0176	4445000000-E	1145	BARRICADES (TYPE III)	344 LF		
0177	4447000000-E	SP	PEDESTRIAN CHANNELIZING DEVICES	40 LF		
0178	4455000000-N	1150	FLAGGER	2,520 DAY		
0179	4465000000-N	1160	TEMPORARY CRASH CUSHIONS	6 EA		
0180	4490000000-E	1170	PORTABLE CONCRETE BARRIER (ANCHORED)	645 LF		
0181	4510000000-N	1190	LAW ENFORCEMENT	48 HR		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0182	4650000000-N	1251	TEMPORARY RAISED PAVEMENT MARKERS	140 EA		
0183	4685000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)	137,707 LF		
0184	4695000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)	778 LF		
0185	4700000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (12", 90 MILS)	1,602 LF		
0186	4709000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (24", 90 MILS)	1,646 LF		
0187	4720000000-E	1205	THERMOPLASTIC PAVEMENT MARKING CHARACTER (90 MILS)	12 EA		
0188	4725000000-E	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	73 EA		
0189	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	46,859 LF		
0190	4820000000-E	1205	PAINT PAVEMENT MARKING LINES (8")	700 LF		
0191	4835000000-E	1205	PAINT PAVEMENT MARKING LINES (24")	392 LF		
0192	4845000000-N	1205	PAINT PAVEMENT MARKING SYMBOL	15 EA		
0193	4850000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (4")	1,500 LF		
0194	4905100000-N	SP	NON-CAST IRON SNOWPLOWABLE PAVEMENT MARKER	849 EA		
0195	5325200000-E	1510	2" WATER LINE	40 LF		
0196	5325600000-E	1510	6" WATER LINE	5,668 LF		
0197	5325800000-E	1510	8" WATER LINE	1,052 LF		
0198	5326200000-E	1510	12" WATER LINE	1,525 LF		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0199	5329000000-E	1510	DUCTILE IRON WATER PIPE FITTINGS	15,400 LB		
0200	5536000000-E	1515	2" VALVE	8 EA		
0201	5540000000-E	1515	6" VALVE	14 EA		
0202	5546000000-E	1515	8" VALVE	3 EA		
0203	5558000000-E	1515	12" VALVE	7 EA		
0204	5606000000-E	1515	2" BLOW OFF	1 EA		
0205	5648000000-N	1515	RELOCATE WATER METER	10 EA		
0206	5649000000-N	1515	RECONNECT WATER METER	12 EA		
0207	5672000000-N	1515	RELOCATE FIRE HYDRANT	6 EA		
0208	5673000000-E	1515	FIRE HYDRANT LEG	110 LF		
0209	5686000000-E	1515	*** WATER SERVICE LINE (2")	455 LF		
0210	5686500000-E	1515	WATER SERVICE LINE	565 LF		
0211	5804000000-E	1530	ABANDON 12" UTILITY PIPE	1,495 LF		
0212	5835800000-E	1540	18" ENCASMENT PIPE	415 LF		
0213	5836000000-E	1540	24" ENCASMENT PIPE	80 LF		
0214	6000000000-E	1605	TEMPORARY SILT FENCE	51,575 LF		
0215	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	3,575 TON		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0216	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	12,255 TON		
0217	6012000000-E	1610	SEDIMENT CONTROL STONE	7,080 TON		
0218	6015000000-E	1615	TEMPORARY MULCHING	84.5 ACR		
0219	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	3,400 LB		
0220	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEEDING	18.5 TON		
0221	6024000000-E	1622	TEMPORARY SLOPE DRAINS	5,890 LF		
0222	6029000000-E	SP	SAFETY FENCE	19,200 LF		
0223	6030000000-E	1630	SILT EXCAVATION	84,450 CY		
0224	6036000000-E	1631	MATTING FOR EROSION CONTROL	209,150 SY		
0225	6037000000-E	SP	COIR FIBER MAT	7,830 SY		
0226	6042000000-E	1632	1/4" HARDWARE CLOTH	11,650 LF		
0227	6070000000-N	1639	SPECIAL STILLING BASINS	44 EA		
0228	6071012000-E	SP	COIR FIBER WATTLE	430 LF		
0229	6071020000-E	SP	POLYACRYLAMIDE (PAM)	3,200 LB		
0230	6071030000-E	1640	COIR FIBER BAFFLE	6,265 LF		
0231	6071050000-E	SP	*** SKIMMER (1-1/2")	47 EA		
0232	6071050000-E	SP	*** SKIMMER (2")	3 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0233	6071050000-E	SP	*** SKIMMER (2-1/2")	2 EA		
0234	6084000000-E	1660	SEEDING & MULCHING	51 ACR		
0235	6087000000-E	1660	MOWING	54 ACR		
0236	6090000000-E	1661	SEED FOR REPAIR SEEDING	900 LB		
0237	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	2.5 TON		
0238	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	1,150 LB		
0239	6108000000-E	1665	FERTILIZER TOPDRESSING	34.25 TON		
0240	6111000000-E	SP	IMPERVIOUS DIKE	1,785 LF		
0241	6114500000-N	1667	SPECIALIZED HAND MOWING	75 MHR		
0242	6114800000-N	SP	MANUAL LITTER REMOVAL	30 MHR		
0243	6114900000-E	SP	LITTER DISPOSAL	7 TON		
0244	6117000000-N	SP	RESPONSE FOR EROSION CONTROL	150 EA		
0245	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	20 EA		
0246	6120000000-E	SP	CULVERT DIVERSION CHANNEL	391 CY		
0247	6123000000-E	1670	REFORESTATION	15 ACR		
0248	6132000000-N	SP	GENERIC EROSION CONTROL ITEM FABRIC INSERT INLET PROTECTION DEVICE	12 EA		
0249	6132000000-N	SP	GENERIC EROSION CONTROL ITEM FABRIC INSERT INLET PROTECTION DEVICE CLEANOUT	36 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0250	7048500000-E	1705	PEDESTRIAN SIGNAL HEAD (16", 1 SECTION W/COUNTDOWN)	14 EA		
0251	7060000000-E	1705	SIGNAL CABLE	10,380 LF		
0252	7120000000-E	1705	VEHICLE SIGNAL HEAD (12", 3 SECTION)	46 EA		
0253	7132000000-E	1705	VEHICLE SIGNAL HEAD (12", 4 SECTION)	17 EA		
0254	7264000000-E	1710	MESSENGER CABLE (3/8")	1,150 LF		
0255	7279000000-E	1715	TRACER WIRE	5,000 LF		
0256	7300000000-E	1715	UNPAVED TRENCHING (***** (1, 2")	1,160 LF		
0257	7300000000-E	1715	UNPAVED TRENCHING (***** (2, 2")	800 LF		
0258	7301000000-E	1715	DIRECTIONAL DRILL (***** (1, 2")	1,100 LF		
0259	7301000000-E	1715	DIRECTIONAL DRILL (***** (2, 2")	4,200 LF		
0260	7324000000-N	1716	JUNCTION BOX (STANDARD SIZE)	22 EA		
0261	7348000000-N	1716	JUNCTION BOX (OVER-SIZED, HEAVY DUTY)	8 EA		
0262	7360000000-N	1720	WOOD POLE	5 EA		
0263	7372000000-N	1721	GUY ASSEMBLY	18 EA		
0264	7396000000-E	1722	1/2" RISER WITH WEATHERHEAD	1 EA		
0265	7408000000-E	1722	1" RISER WITH WEATHERHEAD	3 EA		
0266	7420000000-E	1722	2" RISER WITH WEATHERHEAD	3 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0267	7444000000-E	1725	INDUCTIVE LOOP SAWCUT	2,800 LF		
0268	7456000000-E	1726	LEAD-IN CABLE (***** (14-2)	6,030 LF		
0269	7516000000-E	1730	COMMUNICATIONS CABLE (** FIBER) (24)	5,600 LF		
0270	7528000000-E	1730	DROP CABLE	600 LF		
0271	7540000000-N	1731	SPLICE ENCLOSURE	5 EA		
0272	7552000000-N	1731	INTERCONNECT CENTER	5 EA		
0273	7566000000-N	1733	DELINEATOR MARKER	12 EA		
0274	7588000000-N	SP	METAL POLE WITH SINGLE MAST ARM	4 EA		
0275	7590000000-N	SP	METAL POLE WITH DUAL MAST ARM	2 EA		
0276	7613000000-N	SP	SOIL TEST	7 EA		
0277	7614100000-E	SP	DRILLED PIER FOUNDATION	42 CY		
0278	7631000000-N	SP	MAST ARM WITH METAL POLE DESIGN	7 EA		
0279	7636000000-N	1745	SIGN FOR SIGNALS	3 EA		
0280	7642200000-N	1743	TYPE II PEDESTAL WITH FOUNDATION	11 EA		
0281	7642300000-N	1743	TYPE III PEDESTAL WITH FOUNDATION	1 EA		
0282	7684000000-N	1750	SIGNAL CABINET FOUNDATION	3 EA		
0283	7696000000-N	1751	CONTROLLERS WITH CABINET (***** (TYPE 2070LX, BASE MOUNTED)	3 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0284	7744000000-N	1751	DETECTOR CARD (TYPE 170)	20 EA		
0285	7901000000-N	1753	CABINET BASE EXTENDER	3 EA		
0286	7980000000-N	SP	GENERIC SIGNAL ITEM APS DETECTOR STATIONS	8 EA		
0287	7980000000-N	SP	GENERIC SIGNAL ITEM CENTRAL CONTROL UNITS FOR APS DETECTOR STATIONS	1 EA		
0288	7980000000-N	SP	GENERIC SIGNAL ITEM ETHERNET EDGE SWITCH	5 EA		
0289	7980000000-N	SP	GENERIC SIGNAL ITEM METAL POLE WITH SINGLE MAST ARM/LUMINAIRE ARM	1 EA		
0290	7980000000-N	SP	GENERIC SIGNAL ITEM MICROWAVE VEHICLE DETECTION SYSTEM - MULTIPLE ZONES	3 EA		
0307	7960000000-N	SP	METAL POLE FOUNDATION REMOVAL	2 EA		
0308	7972000000-N	SP	METAL POLE REMOVAL	2 EA		
CULVERT ITEMS						
0291	8126000000-N	414	CULVERT EXCAVATION, STA ***** (10+59.00 -DR1A-)	Lump Sum	L.S.	
0292	8126000000-N	414	CULVERT EXCAVATION, STA ***** (108+27.00 -L-)	Lump Sum	L.S.	
0293	8126000000-N	414	CULVERT EXCAVATION, STA ***** (113+69.00 -L-)	Lump Sum	L.S.	
0294	8126000000-N	414	CULVERT EXCAVATION, STA ***** (144+74.50 -L-)	Lump Sum	L.S.	
0295	8126000000-N	414	CULVERT EXCAVATION, STA ***** (195+16.00 -L-)	Lump Sum	L.S.	
0296	8126000000-N	414	CULVERT EXCAVATION, STA ***** (46+41.00 -L-)	Lump Sum	L.S.	

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0297	8133000000-E	414	FOUNDATION CONDITIONING MATERIAL, BOX CULVERT	785 TON		
0298	8196000000-E	420	CLASS A CONCRETE (CULVERT)	1,115.6 CY		
0299	8245000000-E	425	REINFORCING STEEL (CULVERT)	140,840 LB		
0300	8804000000-N	SP	GENERIC CULVERT ITEM CORRUGATED ALUMINUM PIPE CULVERT	Lump Sum	L.S.	

WALL ITEMS

0301	8802010000-E	SP	SOIL NAIL RETAINING WALLS	10,590 SF		
0302	8802015100-N	SP	SOIL NAIL VERIFICATION TESTS	5 EA		
0303	8802015110-N	SP	SOIL NAIL PROOF TESTS	30 EA		
0304	8802040000-E	453	CIP GRAVITY RETAINING WALLS	1,390 SF		
0305	8847000000-E	SP	GENERIC RETAINING WALL ITEM NON-STANDARD CIP GRAVITY RETAINING WALLS	690 SF		
0306	8847000000-E	SP	GENERIC RETAINING WALL ITEM SMSE RETAINING WALL NO 4	5,600 SF		

0758/Aug05/Q1301504.908/D1187115692210/E308

Total Amount Of Bid For Entire Project :