



STATE OF DELAWARE  
DEPARTMENT OF TRANSPORTATION  
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**VIA OVERNIGHT DELIVERY**

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March 7, 2011

Contract No. T201007203.01  
Federal Aid Project No. EBROS-2010(3)  
PIPE REPLACEMENTS, KENT COUNTY  
Kent County

Ladies and Gentlemen:

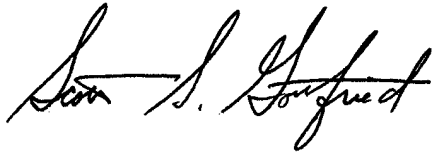
Enclosed is Addendum No. 2 for the referenced contract consisting of the following:

1. One (1) page, Table of Contents, page iv, revised, to be substituted for the same page in the Proposal.
2. Standard Specification 612013 is **DELETED** to be removed from the Proposal.
3. Standard Specification 612015 is **NEW** to be added to the Proposal.
4. Two (2) pages, Special Provisions, 612520 - Corrugated Polyethylene Pipe, Type S, 15", pages 69 through 70, revised, to be substituted for the same pages in the Proposal.
5. Six (6) pages, Special Provisions, 763643 - Maintenance of Traffic - All Inclusive, pages 87 through 92, revised, to be substituted for the same pages in the Proposal.
6. Four (4) pages, Revised Utility Statement, revised, to be substituted for the same pages in the Proposal.
7. Fourteen (14) pages, Bid Proposal Forms, pages 1 through 14, revised, to be substituted for the same pages in the Proposal.
8. One (1) page, Bid Proposal Forms, Breakout Sheet - 1, Item 763643 Maintenance of Traffic, All Inclusive, **DELETED**, to be removed for the Proposal.

9. One (1) sheet, Construction Plans, sheet 10, revised, to be substituted for the same sheet in the Plan Set.
10. For proposal holders with the electronic bid option only, Amendment Disk No. 1.

Please note the revisions listed above and submit your bid based upon this information.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott S. Gottfried". The signature is written in a cursive style with a large initial "S" and a long horizontal stroke.

Scott S. Gottfried  
Competitively Bid Contracts Coordinator  
:ssg  
Enclosures

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- 612544 - CORRUGATED POLYETHYLENE PIPE, TYPE S, 60"**

### **Description:**

This work consists of furnishing and installing corrugated polyethylene pipe with a smooth interior in a reasonably close conformity with lines and grades indicated on the Plans, and as directed by the Engineer.

### **Materials:**

Pipes, couplings and fittings shall be made of polyethylene compounds, and shall meet all applicable requirements of AASHTO M294 current edition Type S or Type D for pipe sizes 12" (300 mm) and larger. Polyethylene pipes, couplings and fittings less than 12" (300 mm) in diameter shall meet the requirements of AASHTO M252 current edition. The pipes and fittings shall be free of foreign inclusions and visible defects and pipe shall be cut squarely and cleanly so as to not adversely affect joining or connecting. Visible defects such as cracks, creases, unpigmented or nonuniformly pigmented pipe are not permissible in the pipe as furnished.

Joints for all pipe and fittings shall use gasketed watertight bell/spigot or bell/bell couplers. The gaskets shall meet the requirements of ASTM F477 and the joint system shall be certified to meet a 10.8 psi (74 kPa) laboratory test per ASTM D3212. In addition, the joint system shall provide sufficient longitudinal strength to preserve pipe alignment and prevent separation at the joint.

The Contractor shall provide a manufacturer's certificate signed by the manufacturer's representative stating the product was manufactured, tested and supplied in accordance with all the applicable requirements of AASHTO M-294 (or ASSHTO M252 as applicable), ASTM F477 and ASTM D3212. The manufacturer shall verify compliance with AASHTO M294 through the National Transportation Product Evaluation Program.

### **Construction Methods:**

**General.** The pipe shall be installed per the notes and details shown on the plans and in accordance with the requirements of ASTM D2321 or the manufactures published guidelines whichever is more stringent. The manufactures representative must be present at the beginning of the installation unless the engineer is confident in the contractors work. Having a representative on the site or not does not dismiss the contractor's liability.

**Excavation.** The trench in which the pipe is laid shall be excavated in accordance with Section 208 and The Standard Construction Details to the required depth. The width of the trench shall provide a minimum clearance of 18" (450 mm) between the trench wall and the O.D. of the pipe. If flowable fill is used, trench width shall provide 6" (150 mm) between the trench wall and O.D. of the pipe. Floating of pipe must be controlled. When multiple pipes are place side by side, a minimum of 18" (450 mm) shall be allowed between pipes or 6" (150 mm) if flowable fill is used.

Minimum cover for pipe under pavement, including local roads, subdivision roads and non-residential driveways, shall be 1' measured from the top of pipe to bottom of pavement. The minimum cover for pipe under the travel way of roads with higher classifications shall be 2' measured from the top of pipe to the bottom of pavement. Otherwise, the cover shall be 1' measured from the top of pipe to top of grade unless otherwise recommended by the manufacturer to prevent pipe flotation.

**Bedding of Pipe.** Unless noted otherwise, all pipes shall be placed on Class C bedding as shown on The Standard Construction Details. The outside thirds of the bedding material shall be compacted. The areas around the joints shall be hand excavated to accommodate the bell when the outside diameter of the bell is greater than the pipe.

**Joints.** The spigot of the pipe shall be fully inserted into the bell to ensure a tight joint.

**Laying Pipe.** All pipe shall be laid in an upgrade direction unless otherwise directed. The pipe shall be laid with the lowest point of the inside diameter conforming to the flow line shown on the Plans. All pipe shall be carefully laid with the bell ends upgrade, with the spigot ends fully entered into the adjoining bell, and true to the lines and grades shown on the Plans, or as directed. Any pipe which is not in true alignment, or which shows any settlement after laying, shall be taken up and re-laid. Unsuitable material encountered below the flow line of the pipe shall be removed to a depth and replaced, as directed.

**Backfill.** Placement of backfill shall conform to Section 208 except as follows:

The initial backfill lift shall not exceed 12" (300 mm) of loose material or be higher than the spring line of the pipe. The material shall be sliced into the haunches of the pipe using a shovel. A maximum of 8" (200 mm) of loose material shall be placed for each remaining lift. Caution shall be taken not to hit the pipe with any mechanical compaction equipment. Caution shall also be taken not to disturb the pipes alignment.

Where heavy construction equipment is expected to travel over the shallow buried pipe the pipe shall be protected by temporarily placing a cover of material as recommended by the manufacturer.

**Video Inspection:**

Video inspection will be required for all pipe and in accordance with Section 612529 - Pipe Video Inspection and DelDOT's CCTV Policy Manual. If deflection in the pipe is clearly visible it will be assumed to be more than 5% and will have to be corrected. If the contractor wishes to challenge this decision they may do so either by direct internal measurement or by the use of a go-no-go mandrel with a minimum of nine points.

**Method of Measurement:**

The quantity of polyethylene pipe will be measured as the actual number of linear feet (linear meters) of each type of pipe placed and accepted, measured from end to end of pipe, including structure wall thickness, but excluding structure interior.

**Basis of Payment:**

The quantity of polyethylene pipe will be paid for at the Contract unit price per linear foot (linear meter) for each type of pipe. Price and payment will constitute full compensation for furnishing, hauling, and installing pipe; for excavation and backfill, for furnishing and placing Type C Borrow, (#57 stone may be substituted under roadway), for all cribbing or foundation treatment (Class C bedding) necessary to prevent settlement; for all shoring and sheeting; for the replacement of any pipe which is not true in alignment or which shows any settlement after laying; for verifying and correcting deflection, for protection of shallow buried pipe and for all material, labor, equipment, tools, and incidentals required to complete the work. Payment for excavation and backfill will be made under the respective pay items. Payment for excavation and replacement of unsuitable material encountered below the Class C bedding will be provided for under Section 208. Payment for Video inspection will be provided for under Section 612529 - Pipe Video Inspection.

2/24/11

## **763643 - MAINTENANCE OF TRAFFIC – ALL INCLUSIVE**

### **Description:**

This item shall consist of furnishing, installing, maintaining and/or relocating the necessary temporary traffic control devices used to maintain vehicular, bicycle and pedestrian traffic, including persons with disabilities in accordance with the Americans with Disabilities Act, as amended. All work shall be performed in a manner that will provide reasonably safe passage with the least practicable obstruction to all users, including vehicular, bicycle and pedestrian traffic.

All requirements of the Delaware Manual on Uniform Traffic Control Devices (MUTCD), Part 6, herein referred to as the Delaware MUTCD. (latest edition with all revisions made up to the date of Advertisement of this project) shall apply for all temporary traffic control devices. Any, and all, control, direction, management and maintenance of traffic shall be performed in accordance with the requirements of the Delaware MUTCD, notes on the Plans, this specification, and as directed by the Engineer.

The Contractor shall be aware that the Case Diagrams and safety measures outlined in the Delaware MUTCD are for common construction situations and modifications may be warranted based on the complexity of the job. The Contractor shall submit justification for modifications to the Temporary Traffic Control Plan (TTCP) to the Engineer for approval prior to implementation.

The Department reserves the right to impose additional restrictions, as needed, for the operational movement and safety of the traveling public. The Department reserves the right to suspend the Contractor's operations until compliance with the Engineer's directive for remedial action, based on but not limited to the following reasons:

1. The Contractor's operations are not in compliance with the Delaware MUTCD, the specifications or the Plans.
2. The Contractor's operations have been deemed unsafe by the Traffic Safety Engineer or District Safety Officer.

### **Materials and Construction Methods:**

The Contractor shall submit a Temporary Traffic Control Plan (TTCP) or a Letter of Intent to use the Plan recommended Delaware MUTCD Case Diagram(s) at or prior to the pre-construction meeting. The Contractor shall submit the TTCP for all Contractor and subcontractor work to be performed on the project for the Department's approval before the start of work.

When specified by a note in the Plans, the Contractor shall be required to have an American Traffic Safety Services Association (ATSSA) certified Traffic Control Supervisor on the project. The authorized designee must be assigned adequate authority, by the Contractor, to ensure compliance with the requirements of the Delaware MUTCD and provide remedial action when deemed necessary by the Traffic Safety Engineer or the District Safety Officer. The ATSSA certified Traffic Control Supervisor's sole responsibility shall be the maintenance of traffic throughout the project. This responsibility shall include, but is not limited to, the installation, operations, maintenance and service of temporary traffic control devices. Also required is the daily maintenance of a log to record maintenance of traffic activities, i.e., number and location of temporary traffic control devices; and times of installation, changes and repairs to temporary traffic control devices. The ATSSA Traffic Control Supervisor shall serve as the liaison with the Engineer concerning the Contractor's maintenance of traffic. The name, contact number and certification for the designated Traffic Control Supervisor shall be submitted at or prior to the pre-construction meeting. The cost of the ATSSA certified

Traffic Control Supervisor shall be incidental to this item.

Temporary traffic control devices shall be maintained in good condition in accordance with the brochure entitled "Quality Guidelines for Temporary Traffic Control Devices", published by the American Traffic Safety Services Association (ATSSA). Any temporary traffic control devices that do not meet the quality guidelines shall be removed and replaced with acceptable devices. Failure to comply will result in work stoppage with time charges continuing to be assessed.

Any existing signs that conflict with any temporary or permanent construction signs shall be covered as needed or as directed by the Engineer. The cost for temporarily covering conflicting signs shall be incidental to this item.

Access to all transit stops located within the project limits shall be maintained unless otherwise directed by the Plans or the Engineer. Maintaining access shall include maintaining an area for the transit vehicle and also an accessible path for pedestrians to safely access the transit stop.

The Contractor shall notify the Engineer, in writing, no less than fourteen (14) calendar days prior to the start of any detour(s) and road closures. The Engineer will notify the following entities:

- Local 911 Center
- Local School Districts
- Local Post Offices
- DelDOT's Transportation Management Center (TMC)
- Town Managers
- Local Police
- DelDOT's Public Relations
- Delaware Transit Corporation (DTC)

Immediately prior to the implementation of any lane or road closures, the Engineer shall notify the DelDOT TMC at (302) 659-4600. Notifications shall also be provided when the closures are lifted. The Engineer shall notify TMC and the District Safety Officer if any lane closures cannot be removed prior to the end of the allowable work hours.

The Contractor shall notify the local 911 center if access to a fire hydrant is temporarily restricted. The Contractor shall provide written confirmation to the Engineer that the local 911 center has been notified.

If a detour is required during any part or the entire period of this Contract, an approved detour plan shall be obtained from the Department's Traffic Safety Section. All signs, barricades and other temporary traffic control devices required as part of the approved detour plan shall be installed and maintained by the Contractor on the route that is closed and on the detour route. Road closures without an approved detour plan shall not be allowed. If a road is closed without an approved detour plan, the Contractor's operations shall be stopped immediately.

The Contractor shall provide and maintain ingress and egress for each property abutting the construction area and each property located between the diversion points of any detour and the actual construction site. Construction activities which may temporarily or otherwise interfere with property access shall be coordinated in advance with the affected property owners.

The Contractor shall conduct construction operations in a manner which will minimize delays to traffic, and shall meet the following requirements:

1. If work is being performed within 200 feet in any direction of an intersection that is



controlled by a traffic signal, the flagger(s) shall direct the flow of traffic in concert with the traffic signals in construction areas to avoid queuing, unless active work prohibits such action. The flagger shall direct traffic to prevent traffic from queuing through an intersection (i.e., blocking an intersection). Only a Traffic Officer may direct traffic against the operation of a traffic signal and only until the operation occurring within the intersection is completed.

2. When a lane adjacent to an open lane is closed to travel, the temporary traffic control devices shall be set 2 feet (0.61 m) into the closed lane from the edge of the open lane, unless an uncured patch exists or actual work is being performed closer to the open lane with minimum restriction to traffic.
3. Except for “buffer lanes” on high volume and/or high speed roadways, lanes shall not be closed unless construction activity requiring lane closure is taking place, or will take place within the next hour. Lanes shall be reopened immediately upon completion of the work. Moving operations will require the lane closures be shortened as the work progresses and as traffic conditions warrant to minimize the length of the closure. The Contractor shall conduct construction operations in a manner so as to minimize disruption to traffic during peak hours and periods of heavy flow. The Department reserves the right to stop or change the Contractor's operations, if in the opinion of the Engineer, such operations are unnecessary at that time or the operations are unnecessarily impeding traffic.
4. Work in the vicinity of traffic signals, shall be scheduled to minimize the time during which the signal is operated without detectors, and prior approval from the Engineer shall be required. TMC shall be notified in advance of cutting a loop detector, and be immediately notified once the loop detector has been reinstalled. The Contractor shall provide sufficient advance notice of the loop detector work with the Engineer to ensure the aforementioned requirements are met.

It is required that all temporary traffic control work and related items shall either be performed entirely by the Contractor's own organization, or totally subcontracted. Maintenance of equipment shall not be subject to this requirement.

Any deficiencies related to temporary traffic control that are reported to the Contractor in writing shall be corrected within 24 hours or as directed by the Engineer. Failure to comply will result in non-payment for those devices that are found to be deficient for the duration of the deficiency. Serious deficiencies that are not corrected immediately shall result in suspension of work until items identified are brought back into compliance.

At the end of each day's work, the Contractor shall correct all pavement edge drop-offs in accordance with Table 6G-1 in the Delaware MUTCD. This corrective work shall be accomplished with Temporary Roadway Material (TRM) unless an alternate method is specified in the Plans. All ruts and potholes shall be filled with TRM as soon as possible but no later than the end of each work day. Placement and Payment of TRM shall be completed in accordance with Section 402 of the Standard Specifications. If temporary elimination of a drop-off hazard cannot be accomplished, then the area should be properly marked and protected with temporary traffic control devices such as temporary barricades, warning signs, flashing lights, etc. as required by Section 6G.21 of the Delaware MUTCD.

All open trench excavation accessible by vehicular traffic must be backfilled prior to the end of each working day. Steel plates shall not be used except in emergency situations and only with prior written approval from the Engineer unless otherwise directed by the Plans.

The Contractor shall submit, at or prior to the preconstruction meeting, detailed drawings including but not limited to existing striping lengths, lane and shoulder widths, turn lane lengths, locations of stop bars, turn arrows, crosswalks and railroad crossings. The drawings shall depict the existing pavement markings for each project location. These drawings will be reviewed by the Department's Traffic Section to determine the need for modification(s) for compliance with the Delaware MUTCD. Temporary pavement markings, on the final pavement surface, shall match the Plan dimensions and layout or the approved drawings of the permanent markings in compliance with Section 3 of the Delaware MUTCD. All conflicting or errant striping shall be removed as directed by the Engineer in compliance with the specifications for Item 748530 (Removal of Pavement Striping).

At the end of each day's operation and before traffic is returned to unrestricted roadway use, temporary striping shall be utilized when the existing pavement is milled and hot mix will not be placed the same day or more than a single course of hot mix is to be placed or permanent roadway striping cannot be placed on the same day as the placement of the final course of hot mix. Placement of temporary striping shall receive prior approval from the Engineer and the contractor shall apply temporary pavement markings in accordance with the requirements of Section 748 of Delaware Standard specifications and the Delaware MUTCD. Payment for temporary pavement striping shall be made at the unit price bid for item 748 - Temporary Striping. Payment for final striping will be included in the applicable striping item.

The Contractor shall have temporary striping/delineating materials (such as raised markers, tape, and other approved materials) available at the job site for verification by the Department prior to starting the hot-mix paving operation on roads to be immediately opened to traffic. These materials shall be used by the Contractor for temporary markings if he/she fails to apply temporary marking paint, etc., as required by the Delaware MUTCD. No paving operations on roads to be immediately opened to traffic will be allowed unless such verification has been made for the availability of the materials at the job site.

**Certification:**

Temporary traffic control devices used on all highways open to the public in this State shall conform to the Delaware MUTCD. All devices shall be crashworthy in accordance with the National Cooperative Highway Research Program (NCHRP) Report 350, the memorandum issued August 28, 1998 by The USDOT Federal Highway Administration, and/or in accordance with the latest edition of the Manual for Assessing Safety Hardware (MASH), published by the American Association of State Highway and Transportation Officials (AASHTO).

The Contractor shall submit certification for temporary traffic control devices or vendors used specifically on this project at or prior to the pre-construction meeting.

Certification of compliance with NCHRP report 350 and/or MASH is required for the following categories of temporary traffic control devices:

**Category I** contains small and lightweight channelizing and delineating control devices which includes cones, tubular markers, flexible delineator post and drums, all without any accessories or attachments.

**Category II** includes temporary traffic control devices that are not expected to produce significant vehicular velocity changes to impacting vehicles. These devices which shall weigh 45 kg or less, include Type I, II and III barricades, portable sign supports with signs, and intrusion alarms. Also included are drums, cones, and vertical panels with accessories or attachments.

**Category III** includes temporary traffic control devices that are expected to cause significant vehicular velocity changes to impacting vehicles. These devices which weigh more than 45 kg include

temporary barrier, temporary impact attenuators, and truck-mounted attenuators.

**Category IV** includes portable or trailer-mounted devices such as arrow panels, variable message signs, temporary traffic signals and temporary area lighting.

For Category I devices, the manufacturer or Contractor may self-certify that the devices meet the NCHRP-350 and/or MASH criteria. The Contractor shall supply the Federal Highway Administration's NCHRP-350 and/or MASH acceptance letter for each type of device that falls under Category II and III devices.

**Basis of Payment:**

Payment will be made at the Lump Sum price for "Maintenance of Traffic", for which price and payment constitutes full compensation for all maintenance of traffic activities accepted by the Engineer, which shall include the cost of furnishing and relocating permanent and temporary traffic control signs, traffic cones or drums, submission of temporary traffic control plan(s), submission of existing pavement marking drawings, submission of all required certifications, labor, equipment and incidentals necessary to complete the item. Payment to furnish and maintain other temporary traffic control devices including but not limited to Portable P.C.C. Safety Barrier, Truck Mounted Attenuators, Portable Changeable Message Signs, Arrow Panels and Portable Light Assemblies will be made at the contract unit price for each item.

**NOTE**

If the Contractor does not complete the Contract work within the Contract completion time (including approved extension time), the Contractor shall be responsible for providing the necessary temporary traffic control devices that are required to complete any remaining work. The costs of such temporary traffic control shall be borne by the Contractor. No additional payment will be made to the Contractor to maintain traffic in accordance with the Delaware MUTCD, contract plans and specifications. Temporary traffic control items include, but not be limited to, warning lights, warning signs, barricades, plastic drums, P.C.C. safety barrier, flaggers, traffic officers, arrow panels, message boards, and portable impact attenuators.

2/23/11





STATE OF DELAWARE  
**DEPARTMENT OF TRANSPORTATION**  
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DOVER, DELAWARE 19903

CAROLANN WICKS, P.E.  
SECRETARY

**REVISED**  
**UTILITY STATEMENT**  
**STATE CONTRACT NO. T201007203**  
**F.A.P. NO. EBROS-2010(3)**  
**PROJECT I.D. # 09-02277**  
**PIPE REPLACEMENTS, KENT COUNTY**

The following utility companies maintain facilities within the limits of the construction project:

DELAWARE ELECTRIC COOPERATIVE, INC.  
DELMARVA POWER  
COMCAST  
VERIZON DELAWARE LLC  
KENT COUNTY DEPT. OF PUBLIC WORKS  
CHESAPEAKE UTILITIES CORPORATION

The following narration describes utility adjustments and / or relocations in reference to the said project.

**Bridge 2-033A on Canterbury Rd**

- DEC owns and maintains aerial facilities within the limits of the construction project. The aerial span is less than 50 kV, (which mandates an OSHA regulated construction clearance of 10ft). The utility poles and aerial span are not impacted during construction; therefore the aerial span, and utility poles will remain in place, and un-disturbed.
- Verizon maintains buried facilities within the construction limits. Underground cable extends between pedestal YC93 (east of the bridge), and pedestal YC93 /4 (west of the bridge). Precaution shall be used to prevent damage to the existing line during excavation. Adjustments will occur in the field as warranted.

- Comcast will remove its existing aerial span between UP1 and UP2 and retire it above ground during construction. Thereafter, they will restore it to its original position.

#### **Bridge 2-105B on Peachtree Run**

- DPL maintains underground facilities within the area which are situated beyond the construction limits.
- Kent County Dept of Public Works maintains underground facilities within the area which are situated beyond the construction limits.
- Chesapeake Utilities maintains underground facilities within the area which are situated beyond the construction limits.
- Verizon maintains buried facilities within the construction limits. Underground cable extends between pedestal EB35A /14W (north of the bridge) and pedestal EB35A /10 (south of the bridge). Precaution shall be used to prevent damage to the existing line during excavation. Adjustments will occur in the field as warranted.

#### **Bridge 2-277C on Fox Hunter's Road**

- DEC owns and maintains aerial facilities above the existing bridge structure. The aerial span is less than 50 kV, mandating an OSHA regulated minimum construction clearance of 10ft. The vertical height of the aerial span prevents it from being impacted during construction. Therefore, the aerial span will remain in place, and un-disturbed during construction.
- Verizon maintains buried facilities within the construction limits. Precaution shall be used to prevent damage to the existing line during excavation. Adjustments will occur in the field as warranted.

#### **Bridge 2-275C on Park Brown Road**

No aerial or underground utility relocation is required.

## General Notes

1. The Contractor's attention is directed to Section 105.09 Utilities, Delaware Standard Specifications, August 2001. The Contractor shall contact Miss Utility (1-800-282-8555) two working days prior to any excavation. The Contractor is responsible for the support and protection of all utilities for excavation and/or demolition. The Contractor is responsible for ensuring proper clearances, including safety clearances, from overhead utilities for construction equipment. The contractor is advised to check the site for access purposes for his equipment and, if necessary make arrangements directly with utility companies for field adjustments for adequate clearances.
2. It is understood and agreed that the Contractor has considered in his bid all permanent and temporary utility appurtenances in their present or relocated positions as shown on the plans or described in the Utility Statement or are readily discernible and that no additional compensation will be allowed for any delays, inconvenience, or damage due to any interference from the utility facilities and appurtenances or the operation of moving them, except that the Contractor may be granted an equitable extension of time.
3. Coordination and cooperation among the Utility Companies and the State's Contractor are of prime importance. Therefore, the Contractor is directed to contact the following Utility Company representatives with any questions regarding this work prior to submitting bids and work schedules. Proposed work schedules should reflect the Utility Companies' proposed relocations. The Utility Companies do not work on weekends or legal holidays.

**General Notes**

The Contractor, prior to laying a run of drainage pipe, installing guard rail, sign posts, or other involved construction, shall excavate within the alignment at points of possible utility conflict to determine if a conflict exists. Any conflicts shall be coordinated by the Contractor with the Engineer and the Utility involved. The Engineer shall determine the solution. Excavating and backfilling of the test holes shall be measured and paid for at a rate of 1.5 times the unit cost bid for Item 202000, Excavation and Embankment, but only to the actual depth excavated

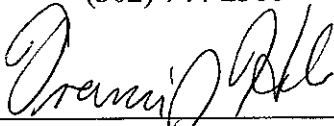
Utility relocation and /or adjustments for each construction site will be performed in advance.

Utility companies request advanced notice prior to date of construction, and stake outs of proposed features and boundaries as needed.

Dave Shapley	Delaware Electric Cooperative	(302) 349-3142
Robert Weigner	Delmarva Power	(302) 934-3354
Bruce Turner	Comcast Cable	(302) 672-5925
George Zang	Verizon Delaware Inc.	(302) 422-1480
Wayne Wallendorf	Chesapeake Utilities	(302) 734-6733
Hans Medlarz	Kent County, Public Works	(302) 744-2300

- 2 - 11 - 11

**Date**

  
**Utility Engineer**



DELAWARE DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF ITEMS

PAGE: 1  
DATE:

CONTRACT ID: T201007203.01 PROJECT(S): EBROS-2010(3)

All figures must be typewritten.

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS

SECTION 0001 BR 2-033A ON CANTERBURY RD OVER PRATT RUN  
EAST OF FELTON

0010	201000 CLEARING AND GRUBBING	LUMP		LUMP		
0020	202000 EXCAVATION AND EMBANKMENT	CY	55.000			
0030	207000 EXCAVATION AND BACKFILL FOR STRUCTURES	CY	80.000			
0040	209002 BORROW, TYPE B	CY	20.000			
0050	209003 BORROW, TYPE C	CY	180.000			
0060	210000 FURNISHING BORROW TYPE "C" FOR PIPE, UTILITY TRENCH, AND STRUCTURE BACKFILL	CY	104.000			
0070	211000 REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP		LUMP		
0080	251000 SILT FENCE	LF	250.000			
0090	263001 SUMP PIT, TYPE 2	EACH	1.000			

CANNOT BE USED FOR BIDDING



DELAWARE DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF ITEMS

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0100	265500 STREAM DIVERSION	LUMP	LUMP			
0110	270500 DEWATERING BAG	1.000 EACH				
0120	302007 GRADED AGGREGATE BASE COURSE, TYPE B	35.000 CY				
0130	302011 DELAWARE NO. 3 STONE	100.000 TON				
0140	401645 SUPERPAVE, TYPE C HOT-MIX, 160 GYRATIONS, PG 64-22 (CARBONATE STONE)	18.000 TON				
0150	401648 SUPERPAVE, TYPE B HOT-MIX, 160 GYRATIONS, PG 64-22	27.000 TON				
0160	401663 SUPERPAVE, BITUMINOUS CONCRETE BASECOURSE, 160 GYRATIONS, PG 64-22	27.000 TON				
0170	608000 COARSE AGGREGATE FOR FOUNDATION STABILIZATION AND SUBFOUNDATION BACKFILL	100.000 TON				
0180	612544 CORRUGATED POLYETHYLENE PIPE, TYPE S, 60"	240.000 LF				
0190	712021 RIPRAP, R-5	300.000 TON				

CANNOT BE USED FOR BIDDING



DELAWARE DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF ITEMS

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0200	712531 CHANNEL BED FILL	45.000 CY				
0210	713003 GEOTEXTILES, RIPRAP	440.000 SY				
0220	732002 TOPSOIL, 6" DEPTH	350.000 SY				
0230	732004 TOPSOIL (TON)	25.000 TON				
0240	734013 PERMANENT GRASS SEEDING, DRY GROUND	350.000 SY				
0250	734015 PERMANENT GRASS SEEDING, WET GROUND	120.000 SY				
0260	735533 SOIL RETENTION BLANKET MULCH, TYPE 3	120.000 SY				
0270	735534 SOIL RETENTION BLANKET MULCH, TYPE 4	350.000 SY				
0280	748506 PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, 4"	200.000 LF				
0290	762001 SAW CUTTING, HOT MIX	56.000 LF				

CANNOT BE USED FOR BIDDING



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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0300	763000 INITIAL EXPENSE	LUMP	LUMP			
0310	763501 CONSTRUCTION ENGINEERING	LUMP	LUMP			
0320	763643 MAINTENANCE OF TRAFFIC, ALL INCLUSIVE	LUMP	LUMP			
SECTION 0001 TOTAL						

SECTION 0002 BR 2-105B ON PEACHTREE RUN OVER TIDBURY CREEK SOUTH OF CAMDEN

0330	201000 CLEARING AND GRUBBING	LUMP	LUMP			
0340	202000 EXCAVATION AND EMBANKMENT	CY	45.000			
0350	207000 EXCAVATION AND BACKFILL FOR STRUCTURES	CY	175.000			
0360	209002 BORROW, TYPE B	CY	25.000			
0370	209003 BORROW, TYPE C	CY	95.000			





DELAWARE DEPARTMENT OF TRANSPORTATION  
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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0380	210000 FURNISHING BORROW TYPE "C" FOR PIPE, UTILITY TRENCH, AND STRUCTURE BACKFILL	228.000 CY				
0390	211000 REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP	LUMP			
0400	251000 SILT FENCE	300.000 LF				
0410	263001 SUMP PIT, TYPE 2	1.000 EACH				
0420	265500 STREAM DIVERSION	LUMP	LUMP			
0430	270500 DEWATERING BAG	1.000 EACH				
0440	302007 GRADED AGGREGATE BASE COURSE, TYPE B	30.000 CY				
0450	302011 DELAWARE NO. 3 STONE	115.000 TON				
0460	401645 SUPERPAVE, TYPE C HOT-MIX, 160 GYRATIONS, PG 64-22 (CARBONATE STONE)	15.000 TON				
0470	401648 SUPERPAVE, TYPE B HOT-MIX, 160 GYRATIONS, PG 64-22	22.000 TON				

CANNOT BE USED FOR BIDDING



DELAWARE DEPARTMENT OF TRANSPORTATION  
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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0480	401663 SUPERPAVE, BITUMINOUS CONCRETE BASECOURSE, 160 GYRATIONS, PG 64-22	22.000 TON				
0490	608000 COARSE AGGREGATE FOR FOUNDATION STABILIZATION AND SUBFOUNDATION BACKFILL	115.000 TON				
0495	612015 REINFORCED CONCRETE PIPE, 72", CLASS III	240.000 LF	200.00000		48000.00	
0510	712021 RIPRAP, R-5	335.000 TON				
0520	712531 CHANNEL BED FILL	55.000 CY				
0530	713003 GEOTEXTILES, RIPRAP	480.000 SY				
0540	732002 TOPSOIL, 6" DEPTH	350.000 SY				
0550	732004 TOPSOIL (TON)	28.000 TON				
0560	734013 PERMANENT GRASS SEEDING, DRY GROUND	350.000 SY				
0570	734015 PERMANENT GRASS SEEDING, WET GROUND	140.000 SY				

CANNOT BE USED FOR BIDDING



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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0580	735533 SOIL RETENTION BLANKET MULCH, TYPE 3	140.000 SY				
0590	735534 SOIL RETENTION BLANKET MULCH, TYPE 4	350.000 SY				
0600	748506 PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, 4"	200.000 LF				
0610	762001 SAW CUTTING, HOT MIX	42.000 LF				
0620	763000 INITIAL EXPENSE	LUMP	LUMP			
0630	763501 CONSTRUCTION ENGINEERING	LUMP	LUMP			
0640	763643 MAINTENANCE OF TRAFFIC, ALL INCLUSIVE	LUMP	LUMP			
	SECTION 0002 TOTAL					
	SECTION 0003 BR 2-275C ON PARK BROWN RD OVER MARSHYHOPE DITCH WEST OF HARRINGTON					
0650	201000 CLEARING AND GRUBBING	LUMP	LUMP			

CANNOT BE USED FOR BIDDING



DELAWARE DEPARTMENT OF TRANSPORTATION  
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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0660	202000 EXCAVATION AND EMBANKMENT	55.000 CY				
0670	208000 EXCAVATION AND BACKFILLING FOR PIPE TRENCHES	45.000 CY				
0680	209002 BORROW, TYPE B	260.000 CY				
0690	210000 FURNISHING BORROW TYPE "C" FOR PIPE, UTILITY TRENCH, AND STRUCTURE BACKFILL	50.000 CY				
0700	211000 REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP	LUMP			
0710	251000 SILT FENCE	330.000 LF				
0720	263001 SUMP PIT, TYPE 2	1.000 EACH				
0730	265500 STREAM DIVERSION	LUMP	LUMP			
0740	270500 DEWATERING BAG	1.000 EACH				
0750	302007 GRADED AGGREGATE BASE COURSE, TYPE B	42.000 CY				

CANNOT BE  
USED FOR  
BIDDING





DELAWARE DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF ITEMS

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0760	302011 DELAWARE NO. 3 STONE	150.000 TON				
0770	401645 SUPERPAVE, TYPE C HOT-MIX, 160 GYRATIONS, PG 64-22 (CARBONATE STONE)	14.000 TON				
0780	401648 SUPERPAVE, TYPE B HOT-MIX, 160 GYRATIONS, PG 64-22	24.000 TON				
0790	612524 CORRUGATED POLYETHYLENE PIPE, TYPE S, 24"	60.000 LF				
0800	712022 RIPRAP, R-6	590.000 TON				
0810	712531 CHANNEL BED FILL	100.000 CY				
0820	713003 GEOTEXTILES, RIPRAP	610.000 SY				
0830	732002 TOPSOIL, 6" DEPTH	600.000 SY				
0840	732004 TOPSOIL (TON)	50.000 TON				
0850	734013 PERMANENT GRASS SEEDING, DRY GROUND	600.000 SY				

CANNOT BE USED FOR BIDDING



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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0860	734015 PERMANENT GRASS SEEDING, WET GROUND	250.000 SY				
0870	735533 SOIL RETENTION BLANKET MULCH, TYPE 3	250.000 SY				
0880	735534 SOIL RETENTION BLANKET MULCH, TYPE 4	600.000 SY				
0890	762001 SAW CUTTING, HOT MIX	38.000 LF				
0900	763000 INITIAL EXPENSE	LUMP	LUMP			
0910	763501 CONSTRUCTION ENGINEERING	LUMP	LUMP			
0920	763643 MAINTENANCE OF TRAFFIC, ALL INCLUSIVE	LUMP	LUMP			
	SECTION 0003 TOTAL					
	SECTION 0004 BR 2-277C ON FOX HUNTERS RD OVER MARSHYHOPE DITCH WEST OF HARRINGTON					
0930	201000 CLEARING AND GRUBBING	LUMP	LUMP			

CANNOT BE USED FOR BIDDING



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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0940	202000 EXCAVATION AND EMBANKMENT	45.000 CY				
0950	207000 EXCAVATION AND BACKFILL FOR STRUCTURES	75.000 CY				
0970	209002 BORROW, TYPE B	100.000 CY				
0980	209003 BORROW, TYPE C	220.000 CY				
0990	210000 FURNISHING BORROW TYPE "C" FOR PIPE, UTILITY TRENCH, AND STRUCTURE BACKFILL	98.000 CY				
1000	211000 REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP	LUMP			
1005	208500 FLOWABLE FILL	30.000 CY				
1010	251000 SILT FENCE	300.000 LF				
1020	263001 SUMP PIT, TYPE 2	1.000 EACH				
1030	265500 STREAM DIVERSION	LUMP	LUMP			

CANNOT BE  
USED FOR  
BIDDING



DELAWARE DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF ITEMS

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1040	270500 DEWATERING BAG	1.000 EACH				
1050	302007 GRADED AGGREGATE BASE COURSE, TYPE B	34.000 CY				
1060	302011 DELAWARE NO. 3 STONE	125.000 TON				
1070	401645 SUPERPAVE, TYPE C HOT-MIX, 160 GYRATIONS, PG 64-22 (CARBONATE STONE)	11.000 TON				
1080	401648 SUPERPAVE, TYPE B HOT-MIX, 160 GYRATIONS, PG 64-22	20.000 TON				
1090	608000 COARSE AGGREGATE FOR FOUNDATION STABILIZATION AND SUBFOUNDATION BACKFILL	90.000 TON				
1100	612520 CORRUGATED POLYETHYLENE PIPE, TYPE S, 15"	160.000 LF				
1110	612531 CORRUGATED POLYETHYLENE PIPE, TYPE S, 48"	160.000 LF				
1120	612544 CORRUGATED POLYETHYLENE PIPE, TYPE S, 60"	80.000 LF				
1130	712021 RIPRAP, R-5	375.000 TON				

CANNOT BE  
USED FOR  
BIDDING





DELAWARE DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF ITEMS

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1140	712531 CHANNEL BED FILL	70.000 CY				
1150	713003 GEOTEXTILES, RIPRAP	525.000 SY				
1160	732002 TOPSOIL, 6" DEPTH	550.000 SY				
1170	732004 TOPSOIL (TON)	36.000 TON				
1180	734013 PERMANENT GRASS SEEDING, DRY GROUND	550.000 SY				
1190	734015 PERMANENT GRASS SEEDING, WET GROUND	180.000 SY				
1200	735533 SOIL RETENTION BLANKET MULCH, TYPE 3	180.000 SY				
1210	735534 SOIL RETENTION BLANKET MULCH, TYPE 4	550.000 SY				
1220	762001 SAW CUTTING, HOT MIX	41.000 LF				
1230	763000 INITIAL EXPENSE	LUMP	LUMP			

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1240	763501 CONSTRUCTION ENGINEERING	LUMP	LUMP			
1250	763643 MAINTENANCE OF TRAFFIC, ALL INCLUSIVE	LUMP	LUMP			
	SECTION 0004 TOTAL					
	TOTAL BID					

CANNOT BE  
USED FOR  
BIDDING



**PROJECT NOTES**

1. **PROPOSED BRIDGE**  
 THE EXISTING 3 - 72" DIA. CORRUGATED METAL PIPES SHALL BE REPLACED WITH 3 - 72" DIA. REINFORCED CONCRETE PIPES (80' LONG). THE CENTER PIPE SHALL BE PLACED 6" BELOW THE ESTABLISHED STREAM GRADE. THE INVERT OF THE OUTER PIPES SHALL BE PLACED AT STREAM GRADE TO MAINTAIN ADEQUATE COVER. PLACE PIPES WITH A MINIMUM 3'-0" GAP BETWEEN RUNS. PLACE 6" COARSE AGGREGATE BEDDING BENEATH PIPES. ~~3 - 72" SRPE (STEEL REINFORCED POLYETHYLENE) PIPES MAY BE USED AS AN ALTERNATE.~~  DELETE NOTE
2. **REMOVAL OF STRUCTURES AND OBSTRUCTIONS**  
 A. THE EXISTING BRIDGE IN ITS ENTIRETY.
3. **RIPRAP PLACEMENT**  
 A. UPSTREAM - RIPRAP SHALL BE PLACED IN THE CHANNEL BOTTOM APPROX. 25' UPSTREAM FROM THE CENTER PIPE INLET.  
 B. DOWNSTREAM - RIPRAP SHALL BE PLACED AROUND THE BEND IN THE STREAM IMMEDIATELY DOWNSTREAM OF THE PIPE OUTLET. IT EXTENDS APPROX. 25' ALONG THE STREAM CENTERLINE AND SHALL BE PLACED TO CREATE A GUIDE BANK ON THE SOUTHEAST CORNER TO PREVENT EROSION OF THE EXISTING YARD. THE DOWNSTREAM EDGE OF THE RIPRAP SHALL SMOOTHLY TRANSITION INTO THE EXISTING ISLAND / SPLIT FLOW.  
 C. THE PROPOSED RIPRAP BANK SHALL BE CONSTRUCTED SUCH THAT IT MINIMIZES ANY DAMAGE TO EXISTING TREES IN THE YARD OF PARCEL 1-R (NEARHOS). THE CONTRACTOR SHALL NOT DISTURB THESE TREES. PLACE BORROW TYPE B AS NECESSARY TO BUILD UP FROM THE EXISTING BANK TO THE PROPOSED.
4. EXISTING STRIPING SHALL BE REPLACED IN KIND (DOUBLE YELLOW CENTERLINE AND WHITE EDGE LINES).
5. THE CONTRACTOR SHALL NOTIFY DART (VINCENT DAMIANI @ 302-576-6094, TREMICA CHERRY @ 302-576-6065 OR LISA COLLINS @ 302-576-6067) TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AT THIS SITE.

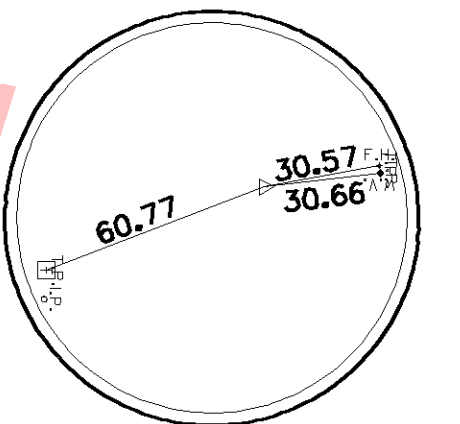
**HORIZONTAL CURVE DATA**

P. I. STA. = 1+87.73  
 $\Delta = 7^\circ 1' 52.6" R$   
 R = 583.97'  
 T = 35.88'  
 L = 71.66'  
 E = 1.10'

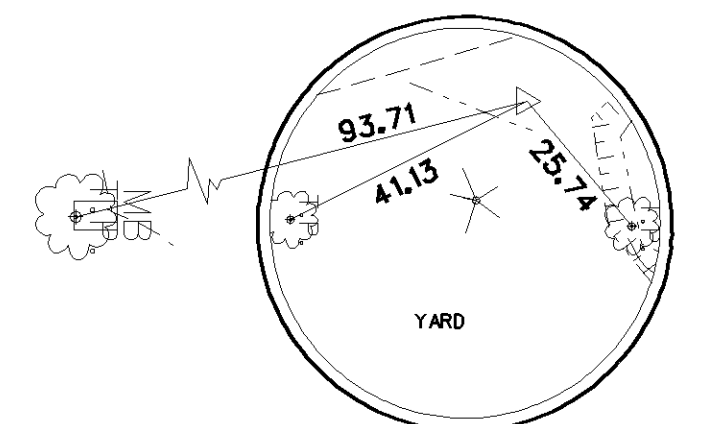
CONSTRUCTION ALIGNMENT CONTROL				
POINT	STATION	OFFSET	NORTHING	EASTING
POB	0+00.00	0.00	395638.56	619160.17
CL STR	1+25.00	0.00	395758.57	619125.20
PC	1+51+85	0.00	395784.35	619117.68
PI	1+87.73	-1.10	395818.79	619107.64
POE	2+23.51	0.00	395854.21	619101.90

NOTE: CURVE CONTINUES BEYOND LIMITS OF SURVEY

**UTILITY POLE LEGEND**



**TRAVERSE #3**  
 STA. N/A  
 COORDINATES  
 NORTHING = 395272.92  
 EASTING = 619249.03  
 EL. = 35.94

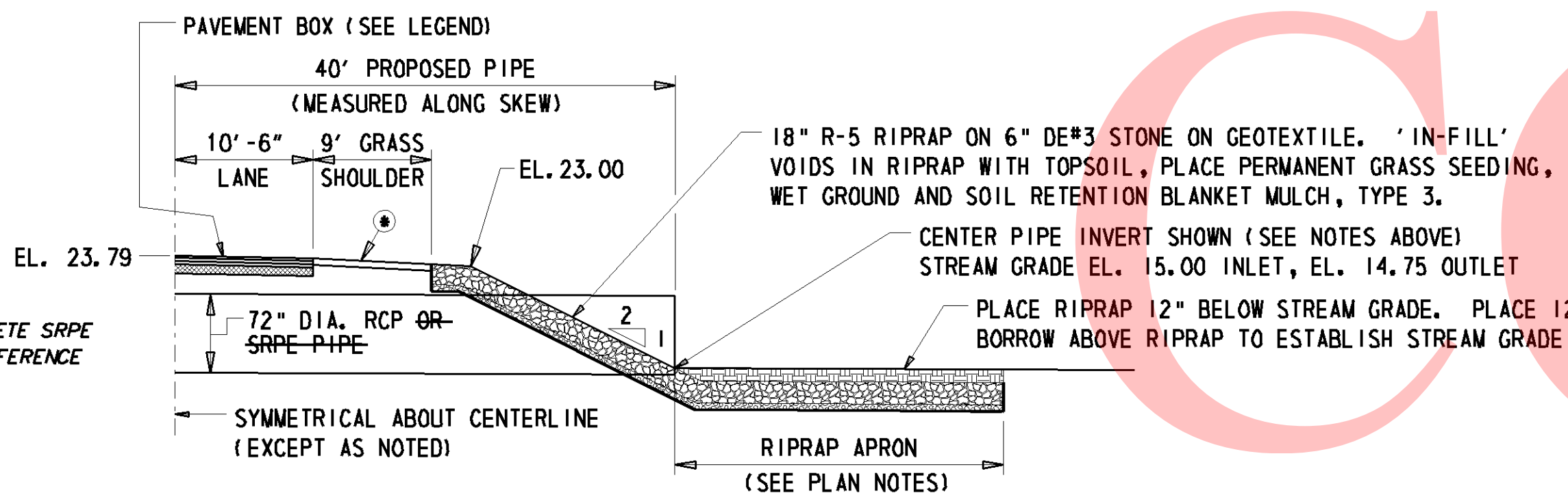
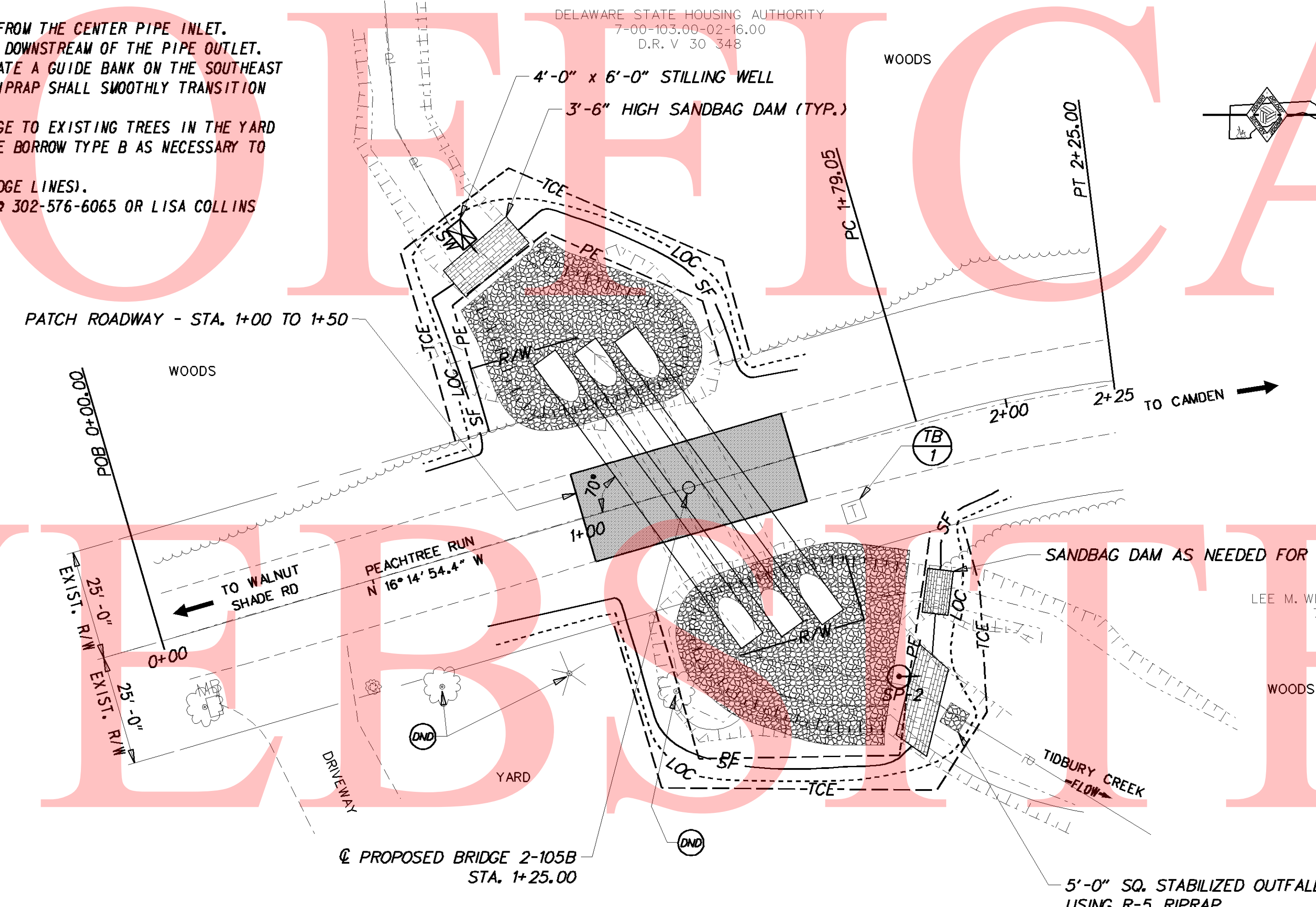


**TRAVERSE #4**  
 STA. 0+98.73 / 20.30'R  
 COORDINATES  
 NORTHING = 395739.04  
 EASTING = 619152.04  
 EL. = 22.67

MAUD D. WILLIM  
 7-00-103.00-01-73.00  
 D.R. C 21189

LEE M. WEAVER & VERONICA E. WEAVER  
 7-00-103.00-02-25.00  
 D.R. Z 30 479

TIMOTHY NEARHOS  
 7-00-103.00-02-27.00  
 D.R. 9047 143



**TYPICAL SECTION**

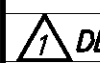
1" = 10'

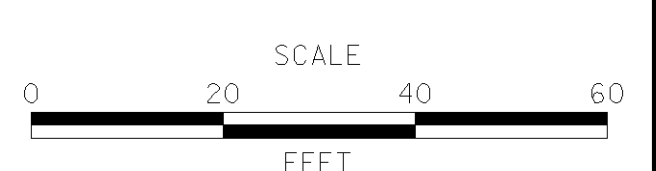
\* - PLACE 6" TOPSOIL, PERMANENT SEEDING DRY GROUND AND SOIL RETENTION BLANKET MULCH, TYPE 4.

**SEQUENCE OF CONSTRUCTION:**

1. CLOSE PEACHTREE RUN IN ACCORDANCE WITH THE DETOUR PLAN.
2. PLACE SILT FENCE, EXCEPT CONNECTION TO SANDBAG DIKES, AS SHOWN ON THE PLAN. CONSTRUCT SANDBAG DIKES IN THE EXISTING CHANNEL AND CONNECT THE SILT FENCE TO THE SANDBAG DIKE TO ENCLOSE THE WORK AREA. INSTALL STABILIZED OUTFALL USING R-5 RIPRAP. THE CONTRACTOR SHALL PUMP BASE FLOW TO MAINTAIN STREAM FLOW AROUND THE WORK AREA. THE STREAM DIVERSION SHALL BE INSTALLED AS PER ITEM 265500 - STREAM DIVERSIONS. INSTALL SUMP PIT AND DEWATERING BAG FOR USE IN DEWATERING THE WORK AREA. SEE SECTION 110.13 OF THE STANDARD SPECIFICATIONS FOR MORE INFORMATION ON DEWATERING OPERATIONS.
2. REMOVE THE EXISTING PIPES.
3. INSTALL THE PROPOSED RCP OR SRPE PIPES. INSTALL RIPRAP, CHANNEL BED FILL ('B' BORROW) AND SLOPE STABILIZATION AS NOTED.
4. INSTALL PROPOSED PAVEMENT AND COMPLETE ANY OTHER REMAINING WORK.
5. REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES (INCLUDING RIPRAP USED AS STABILIZED OUTFALL) AND RESTORE THE STREAM TO EXISTING CONDITIONS AS OUTLINED IN THE ENVIRONMENTAL COMPLIANCE NOTES. REMOVE ALL MAINTENANCE OF TRAFFIC DEVICES.



ADDENDUMS / REVISIONS	
	DELETE REFERENCES TO SRPE PIPE



**PIPE REPLACEMENTS, KENT COUNTY**

CONTRACT	BRIDGE NO.	<b>2-105B</b>
T201007203	DESIGNED BY:	GCL III
COUNTY	CHECKED BY:	GCL III
KENT		

<b>CONSTRUCTION PLAN</b>	SHEET NO.	10
	TOTAL SHTS.	28

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