



**SOUTH CHARLESTON SANITARY BOARD  
KANAWHA COUNTY, WEST VIRGINIA**

**PROPOSED  
DAVIS CREEK SEWER CROSSING REPLACEMENT**

**MARCH 1, 2018  
ADDENDUM #1**

To whom it may concern:

**A. BOILER PLATE**

1. The Bid opening will be held Tuesday, March 6, 2018 at South Charleston Sanitary Board office located at 1 Rockcrest Drive Box 8336, South Charleston, Kanawha County, West Virginia, at 10:00 AM.

**B. SPECIFICATIONS**

1. **DELETE** Section 011000 – “Summary” in its entirety and **REPLACE** with the attached Section 011000 – “Summary”.
2. **DELETE** Section 012000 – “Price and Payment Procedures” in its entirety and **REPLACE** with the attached Section 012000 – “Price and Payment Procedures”.
3. **DELETE** Section 018979 – “Leakage Test – Sanitary Sewer” in its entirety and **REPLACE** with the attached Section 018979 – “Leakage Test – Sanitary Sewer”.

**C. DRAWINGS**

1. **DELETE** Drawing Sheet LAYOUT and **REPLACE** it with the attached Drawing Sheet LAYOUT.
2. **DELETE** Drawing Sheet 2 and **REPLACE** it with the attached Drawing Sheet 2.
3. **DELETE** Drawing Sheet D-1 and **REPLACE** it with the attached Drawing Sheet D-1.

**D. QUESTIONS AND CLARIFICATIONS**

1. Contractor will notify South Charleston seven (7) calendar days before bypass is needed. Owner will install and maintain the temporary bypass pumping for a duration of 30 calendar days. Contractor will reimburse South Charleston Sanitary Board \$1,600 per calendar day of bypass pumping after the 30 calendar days.
2. A copy of the pre-bid sign-in list has been provided with this Addendum.
3. A correct copy of the pre-bid agenda has been provided with this Addendum.
4. A current State of West Virginia Contractor’s License is required to bid the project. A City of South Charleston Contractor’s License is required for the project to be awarded.
5. Owner will handle WVDOH permit fees and any other permit fees. Contractor will be responsible for any permit fines.

6. The South Charleston Sanitary Board will **NOT** provide their FEIN number. The Contractor is responsible for sales tax on material.
7. The proposed 16" steel Casing shall be coated on the interior and exterior including welded joints.
8. The Engineer's Estimate is approximately \$135,000.

If you have any questions or need any other information, please contact Daniel Ferrell, P.E. via email ([dferrell@thethrasherroup.com](mailto:dferrell@thethrasherroup.com)) or by phone at 304-288-7755.

Sincerely,

THE THRASHER GROUP, INC.



Daniel Ferrell, P.E.  
Project Manager

Enclosures



## SECTION 011000 - SUMMARY

### PART 1 - GENERAL

#### 1.1 SUMMARY

##### A. Section Includes:

1. Contract description.
2. Work by Owner or other Work at the Site.
3. Owner-furnished products.
4. Contractor's use of Site.
5. Future work.
6. Work sequence.
7. Owner occupancy.
8. Permits.
9. Specification conventions.

#### 1.2 CONTRACT DESCRIPTION

- A. Work of the Project includes the installation of approximately 130 LF of 8-inch ductile iron sewer pipe, approximately 100 LF of 16-inch Coated Steel Casing, steel and concrete supports, expansion joint, concrete anchor, one (1) tie-into existing manhole, erosion and sediment controls, site restoration, and all miscellaneous appurtenances as shown on the drawings, specified in the specifications and required for a complete and operational sewer system.
- B. Perform Work of Contract under fixed cost Contract with Owner according to Conditions of Contract.

#### 1.3 WORK BY OWNER OR OTHERS – Not Used

#### 1.4 OWNER-FURNISHED PRODUCTS – Not Used

#### 1.5 CONTRACTOR'S USE OF SITE

##### A. Limit use of Site to allow:

1. Owner occupancy.
2. Use of Site by the public.

1.6 FUTURE WORK – Not Used

1.7 WORK SEQUENCE

1. Call MISS utility 1-800-245-4848.
2. South Charleston Sanitary Board will install and maintain the temporary bypass pumping from manhole #1 to manhole #2. (duration of 30 calendar days)
3. Remove the existing 8 5/8" O.D. spiral welded steel gravity sewer line from existing flange #1 to the existing coupler.
4. Remove C channel cross members from the existing pier mounted pipe supports.
5. Install the column casing support structure. coat steel per specification.
6. Install 8" ductile iron pipe from existing manhole #2 to 8" Flange "A".
7. Install concrete anchor.
8. Install new lower C channel cross member on the existing pier mounted pipe supports.
9. Weld the 16" coated steel casing on bridge and fabricate the casing 2" drain per detail on Sheet No. 3.
10. Recoat the 16" coated steel casing and allow to cure.
11. Install casing spacers and bell restraints on the 8" ductile iron carrier pipe.
12. Push 8" ductile iron carrier pipe into the 16" coated steel casing
13. Install casing and carrier pipe onto supports.
14. Install new upper C channel cross member on the existing pier mounted pipe supports.
15. Fabricate roller assembly.
16. Install expansion joints onto the support pier with rollers.
17. Bolt the expansion joints to the proposed carrier pipe with a mechanical joint flange adaptor.
18. Plug new invert in manhole #2 and cap the expansion joint. Perform pressure testing.
19. Cut existing 8" spiral welded steel pipe close to the bridge abutment wingwall and field weld an 8" flange onto the existing 8" spiral welded steel.
20. Install 8" ductile iron spool piece from expansion joint to the field welded flange "B".
21. Remove temporary bypass pumping.
22. Install end seals on the casing.
23. Scrape, pressure wash and recoat the existing pier mounted pipe supports and existing 8 5/8" O.D. spiral welded pipe per Specification 099010.
24. Perform final clean-up.
25. Conduct substantial completion walk-through inspection.
26. Complete all punch list items.
27. Final cleanup.

1.8 OWNER OCCUPANCY

- A. Schedule and substantially complete designated portions of the Work for occupancy before Substantial Completion of the entire Work.
- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.

1.9 PERMITS – Not Used

1.10 SPECIFICATION CONVENTIONS

- A. These Specifications are written in imperative mood and streamlined form. This imperative language is directed to Contractor unless specifically noted otherwise. The words "shall be" are included by inference where a colon (:) is used within sentences or phrases.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION 011000

## SECTION 012000 - PRICE AND PAYMENT PROCEDURES

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. Cash allowances.
- B. Contingency allowances.
- C. Testing and inspection allowances.
- D. Schedule of Values.
- E. Application for Payment.
- F. Change procedures.
- G. Defect assessment.
- H. Unit prices.
- I. Alternates.

#### 1.2 CASH ALLOWANCES – Not Used

#### 1.3 CONTINGENCY ALLOWANCES – Not Used

#### 1.4 TESTING AND INSPECTION ALLOWANCES – Not Used

#### 1.5 SCHEDULE OF VALUES – Not Used

#### 1.6 APPLICATION FOR PAYMENT

- A. Submit three copies of each Application for Payment on EJCDC C-620 - Contractor's Application for Payment.
- B. Content and Format: Use Schedule of Values for listing items in Application for Payment.
- C. Submit updated construction schedule with each Application for Payment.
- D. Payment Period: Monthly.

- E. Submit submittals with transmittal letter as specified in Section 013300 - Submittal Procedures.
- F. Submit three copies of Affidavit of Payment to Subcontractors/Suppliers, and Abnormal Weather Day Sheet.

#### 1.7 CHANGE PROCEDURES

- A. Document requested substitutions according to Section 012500 - Substitution Procedures.
- B. Stipulated Sum/Price Change Order: Based on Proposal Request and Contractor's fixed price quotation or Contractor's request for Change Order as approved by Engineer.
- C. Unit Price Change Order: For Contract unit prices and quantities, the Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units of that which are not predetermined, execute Work under Construction Change Directive. Changes in Contract Sum/Price or Contract Time will be computed as specified for Time and Material Change Order.
- D. Construction Change Directive: Engineer may issue directive, on EJCDC C-940 - Work Change Directive signed by Owner, instructing Contractor to proceed with change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute change.
- E. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in Conditions of the Contract. Engineer will determine change allowable in Contract Sum/Price and Contract Time as provided in Contract Documents.
- F. Bypass Pumping Overrun Change Order: In the event the temporary bypass pumping is needed for longer than 30 calendar days the contractor will be required to reimburse the South Charleston Sanitary Board \$1,600 per day. The Change Order cost will include \$1,600 per day to implement a temporary pumping system for the purpose of diverting existing sewer flows around the work area as needed.
- G. Bypass Pumping Time and Material Change Order: If the temporary bypass pumping system is damaged due to the actions of the Contractor then the Contractor will be required to reimburse the South Charleston Sanitary Board through a Time and Material Change Order. The Change Order cost will include any fines associated with a spill and all materials, labor, equipment, power, maintenance, etc. to repair the damage to the temporary pumping system.
- H. Maintain detailed records of Work done on time and material basis. Provide full information required for evaluation of proposed changes and to substantiate costs for changes in the Work.
- I. Document each quotation for change in Project Cost or Time with sufficient data to allow evaluation of quotation.
- J. Change Order Forms: EJCDC C-941 - Change Order.

- K. Execution of Change Orders: Engineer will issue Change Orders for signatures of parties as provided in Conditions of the Contract.
- L. Correlation of Contractor Submittals:
  - 1. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Sum/Price.
  - 2. Promptly revise Progress Schedules to reflect change in Contract Time, revise subschedules to adjust times for other items of Work affected by the change, and resubmit.
  - 3. Promptly enter changes in Record Documents.

#### 1.8 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of Engineer, it is not practical to remove and replace the Work, Engineer will direct appropriate remedy or adjust payment.
- C. The defective Work may remain, but unit sum/price will be adjusted to new sum/price at discretion of Engineer.
- D. Defective Work will be partially repaired according to instructions of Engineer, and unit sum/price will be adjusted to new sum/price at discretion of Engineer.
- E. Individual Specification Sections may modify these options or may identify specific formula or percentage sum/price reduction.
- F. Authority of Engineer to assess defects and identify payment adjustments is final.
- G. Nonpayment for Rejected Products: Payment will not be made for rejected products for any of the following reasons:
  - 1. Products wasted or disposed of in a manner that is not acceptable.
  - 2. Products determined as unacceptable before or after placement.
  - 3. Products not completely unloaded from transporting vehicle.
  - 4. Products placed beyond lines and levels of the required Work.
  - 5. Products remaining on hand after completion of the Work.
  - 6. Loading, hauling, and disposing of rejected products.

#### 1.9 UNIT PRICES

- A. Engineer will take measurements and compute quantities accordingly. Provide assistance in taking of measurements.
- B. Unit Quantities: Quantities and measurements indicated on Bid Form are for Contract purposes only. Quantities and measurements supplied or placed in the Work shall determine payment.

1. When actual Work requires more or fewer quantities than those quantities indicated, provide required quantities at contracted unit sum/prices.
  2. When actual Work requires 25 percent or greater change in quantity than those quantities indicated, Owner or Contractor may claim a Contract Price adjustment.
- C. Payment Includes: Full compensation for required labor, products, tools, equipment, plant and facilities, transportation, services and incidentals; erection, application, or installation of item of the Work; overhead and profit.
- D. Final payment for Work governed by unit prices will be made on basis of actual measurements and quantities accepted by Engineer multiplied by unit sum/price for Work incorporated in or made necessary by the Work.
- E. Measurement of Quantities:
1. Weigh Scales: Inspected, tested, and certified by applicable West Virginia weights and measures department within past year.
  2. Platform Scales: Of sufficient size and capacity to accommodate conveying vehicle.
  3. Metering Devices: Inspected, tested, and certified by applicable West Virginia department within past year.
  4. Measurement by Weight: Concrete reinforcing steel, rolled or formed steel, or other metal shapes will be measured by handbook weights. Welded assemblies will be measured by handbook or scale weight.
  5. Measurement by Volume: Measured by cubic dimension using mean length, width, and height or thickness.
  6. Measurement by Area: Measured by square dimension using mean length and width or radius.
  7. Linear Measurement: Measured by linear dimension, at item centerline or mean chord.
  8. Stipulated Sum/Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as completed item or unit of the Work.
- F. Unit Price Schedule:
1. Bid Item 1: Mobilization/Demobilization
    - a. This Bid item shall include all costs associated with mobilization including construction field office. This Bid item shall also include payment of all bonding costs incurred by the Contractor. This Bid item shall include all materials and equipment required for unloading and reloading. This Bid item shall also include all costs associated with demobilization.
    - b. The total Bid Price for mobilization/demobilization shall not exceed 5% of the total Project Bid. The payment request for mobilization in the first pay request shall not exceed one third of the total Bid Price for this Item. The second pay request shall include the second third of the total Bid Price. The balance shall be considered demobilization and paid at substantial completion once cleanup is completed.
    - c. No deduction shall be made, nor shall any increase be made, in the Contract lump sum Bid Price for mobilization/demobilization regardless of any decreases or increases in the final total Contract Price, or for any other cause.
  2. Bid Item 2: Video Taping of Project Area

- a. The cost of this work shall be included in a lump sum bid item. Such payment shall constitute full compensation for labor, materials, equipment and other cost associated to provide a complete documentation.
  - b. Videotaping shall include the entire construction area affected, including any Contractor secured waste site and material storage or staging areas.
- 3. Bid Item 3: Erosion and Sediment Control
  - a. The cost for this Work shall be a lump sum.
  - b. This Bid item shall include all costs associated with erosion and sedimentation controls including all materials and labor for installation, maintenance, and removal.
  - c. The cost of this Work shall be paid for at the lump sum Bid price for all erosion and sedimentation controls at all locations directly and/or indirectly disturbed by the Work.
- 4. Bid Item 4: Davis Creek Sewer Crossing Replacement
  - a. The cost of this item shall be lump sum.
  - b. This Bid Item shall include all costs associated with the Davis Creek Sewer Crossing Replacement, including all materials and labor, as specified herein and within the Drawings for a complete and fully operating system.
  - c. This Bid item shall include all required labor, materials, equipment and all other costs associated with the installation of the 8" ductile iron sewer line, 12" coated steel casing, casing spacers, end seals, coatings systems, coating rehabilitation, expansion joint, concrete anchor, manhole tie-in, pavement protection measures, curb protection measures, and concrete support structures including excavation, backfill, materials, fittings, pipe joints, pipe, tools, supplies, material testing, sanitary sewer line testing, traffic control, asphalt repair, curb repair, seeding and mulching, and all other incidentals. All work shown or implied in the Contract Documents not including work in Bid Items 1, 2, or 3 shall be included in Bid Item 4.
  - d. Measurement and payment shall be based on the approved Schedule of Values.

1.10 ALTERNATES – Not Used

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION 012000

## SECTION 018919 - LEAKAGE TEST – SANITARY SEWER

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract Documents, including General and Supplementary Conditions, Division 01, and all related Specification Sections, apply to this Section.

#### 1.2 DESCRIPTION OF WORK

- A. Scope of Work: Provide the labor, tools, equipment, and materials necessary to perform the leakage tests of pipes, pipe linings, and manholes in accordance with the Drawings and the Specifications.

#### 1.3 QUALITY ASSURANCE

- A. ASTM: American Society for Testing and Materials.

#### 1.4 JOB CONDITIONS

- A. All leakage testing shall be completed prior to connecting existing house services to new or lined sewers, unless otherwise approved by the Engineer.

### PART 2 - PRODUCTS (Not Used)

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine conditions under which the pipe Section, manhole, facility, or part of a facility, is to be tested and verify that conditions are satisfactory and ready for the test to proceed.

#### 3.2 PREPARATION

- A. Protection: The Contractor is to protect adjacent equipment, materials, piping and valves against drainage from testing.

- B. Notification: The Contractor is to notify the Engineer at least twenty-four (24) hours prior to any testing. Notify the Engineer immediately of all unsatisfactory or nonconforming conditions.
- C. Responsibility: Once the Contractor begins the test means acceptance of all the existing surfaces and conditions.

### 3.3 SUMMARY OF REQUIREMENTS

- A. Contractor Responsibility: Sanitary sewer and leakage testing in areas of new sewer construction, new sewer replacement constructed in the same area as existing sewer, cured-in-place sewer liners, new manholes, and manhole lining systems shall be the responsibility of the Contractor.
- B. Test Section New Sewers: A sanitary sewer test section shall be between the tie-in locations. The Contractor shall install temporary plugs where necessary to accommodate the leakage test procedure.
- C. Test Procedure: a low-pressure air test for gravity sewers.

#### 1. Low-Pressure Air Test:

- a. Isolate the newly installed section of 8" Ductile Iron restrained joint sewer line to be tested by installing a pneumatic plug in manhole #2 and installing a cap on the expansion joint.
- b. Either the cap or pneumatic plug should have an inlet tap, or other provision for connecting a hose to a portable air control source.
- c. Connect the air hose to the inlet tap and portable air control source. The air equipment shall consist of necessary valves and pressure gages to control an oil-free air source and the rate at which air flows into the test section to enable monitoring of the air pressure within the test section.
- d. Add air slowly to the test section until the pressure inside the pipe reaches 4.0 psig.
- e. After the pressure of 4.0 psig is obtained, regulate the air supply so that the pressure is maintained between 3.5 to 4.0 psig for at least 2 min depending on air/ground temperature conditions. The air temperature should stabilize in equilibrium with the temperature of the pipe walls. The pressure will normally drop slightly until equilibrium is obtained; however, a minimum of 3.5 psig is required.
- f. The section of newly installed 8" Ductile Iron restrained joint sewer line shall not lose more than 0.5 psig in 4 minutes.
- g. Testing shall meet the requirements of the following standards:

Pipe Material	Testing Standard
---------------	------------------

Concrete Pipe (24 inches and under)	ASTM C924
Concrete Pipe (over 24 inches)	ASTM C1103
Clay Pipe	ASTM C828
Plastic Pipe	ASTM F1417
All Others	ASTM F1417

- h. The pressure gauge shall have a range of 0 - 10 psi (max) with a gauges figure interval of 1 psi.

### 3.4 FIELD QUALITY CONTROL

#### A. Field Tests

1. Provide all test materials, equipment and water required for testing at no additional cost to Owner.
2. Perform testing according to the methods described in this Section.

#### B. Witness

1. All leakage tests shall be witnessed and approved by the Engineer and/or Owner.
2. Any test performed without witness by the Engineer may require retesting the Section in conformance with the Specification at no cost to the Owner.

### 3.5 ADJUSTING

- A. Test Results: If the field test show excessive leakage, the Contractor shall repair, adjust, modify or replace the non-complying sections until the tests are successfully completed. This shall be done at no additional cost to the Owner.

### 3.6 CLEANING AND DISPOSAL

- A. Remove and dispose of all excess material and debris as a result of the Work completed under this Section, including testing procedures.

### 3.7 PROTECTION REQUIREMENTS

- A. Protect the sections tested and approved, but prior to acceptance by the Owner.
- B. Protection of the tested and approved Work shall include provisions during installation and testing of nearby piping, valves, or other adjacent equipment.
- C. Remove all protective measures installed at completion and acceptance of the Project.

END OF SECTION 018919

CAD FILE: R:\020-1470 RIVERSIDE AVE 1 & 1-S. CHARLESTON SANITARY BOARD-Drawing\Davis Creek Sewer Crossing (5-10-2017)\00-Layout Sheet.dwg  
PLOT DATE/TIME: 2/26/2018 8:40 AM  
LAYOUT: Layout  
USER: Jason C. Fisher

1

SEQUENCE OF EVENTS:

1. CALL MISS UTILITY 1-800-245-4848.
2. SOUTH CHARLESTON SANITARY BOARD WILL INSTALL AND MAINTAIN THE TEMPORARY BYPASS PUMPING FROM MANHOLE #1 TO MANHOLE #2. (DURATION OF 30 CALENDAR DAYS)
3. REMOVE THE EXISTING 8 5/8" O.D. SPIRAL WELDED STEEL GRAVITY SEWER LINE FROM EXISTING FLANGE #1 TO THE EXISTING COUPLER.
4. REMOVE C CHANNEL CROSS MEMBERS FROM THE EXISTING PIER MOUNTED PIPE SUPPORTS.
5. INSTALL THE COLUMN CASING SUPPORT STRUCTURE. COAT STEEL PER SPECIFICATION.
6. INSTALL 8" DUCTILE IRON PIPE FROM EXISTING MANHOLE #2 TO 8" FLANGE "A".
7. INSTALL CONCRETE ANCHOR
8. INSTALL NEW LOWER C CHANNEL CROSS MEMBER ON THE EXISTING PIER MOUNTED PIPE SUPPORTS.
9. WELD THE 16" COATED STEEL CASING ON BRIDGE AND FABRICATE THE CASING 2" DRAIN PER DETAIL ON SHEET NO. 3.
10. RECOAT THE 16" COATED STEEL CASING AND ALLOW TO CURE.
11. INSTALL CASING SPACERS AND BELL RESTRAINTS ON THE 8" DUCTILE IRON CARRIER PIPE.
12. PUSH 8" DUCTILE IRON CARRIER PIPE INTO THE 16" COATED STEEL CASING
13. INSTALL CASING AND CARRIER PIPE ONTO SUPPORTS.
14. INSTALL NEW UPPER C CHANNEL CROSS MEMBER ON THE EXISTING PIER MOUNTED PIPE SUPPORTS.
15. FABRICATE ROLLER ASSEMBLY.
16. INSTALL EXPANSION JOINTS ONTO THE SUPPORT PIER WITH ROLLERS.
17. BOLT THE EXPANSION JOINTS TO THE PROPOSED CARRIER PIPE WITH A MECHANICAL JOINT FLANGE ADAPTOR.
18. PLUG NEW INVERT IN MANHOLE #2 AND CAP THE EXPANSION JOINT. PERFORM PRESSURE TESTING.
19. CUT EXISTING 8" SPIRAL WELDED STEEL PIPE CLOSE TO THE BRIDGE ABUTMENT WINGWALL AND FIELD WELD AN 8" FLANGE ONTO THE EXISTING 8" SPIRAL WELDED STEEL.
20. INSTALL 8" DUCTILE IRON SPOOL PIECE FROM EXPANSION JOINT TO THE FIELD WLEDED FLANGE "B".
21. REMOVE TEMPORARY BYPASS PUMPING.
22. INSTALL END SEALS ON THE CASING.
23. SCRAPE, PRESSURE WASH AND RECOAT THE EXISTING PIER MOUNTED PIPE SUPPORTS AND EXISTING 8 5/8" O.D. SPIRAL WELDED PIPE PER SPECIFICATION 099010.
24. PERFORM FINAL CLEAN-UP.
25. CONDUCT SUBSTANTIAL COMPLETION WALK-THROUGH INSPECTION.
26. COMPLETE ALL PUNCH LIST ITEMS.
27. FINAL CLEANUP.



ADDENDUM #1



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1	JRF	2/26/18	ADDENDUM #1	
NO.	BY	DATE	DESCRIPTION	



SCALE: AS SHOWN	
DRAWN: B. QUERREY	DATE: MAY 2017
CHECKED: C. SMITH	DATE: JANUARY 2018
APPROVED: D. FERRELL	DATE: JANUARY 2018
SURVEY DATE:	
SURVEY BY:	
FIELD BOOK No.:	

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PHASE No.
CONTRACT No.
1
PROJECT No.
020-1470

SOUTH CHARLESTON SANITARY BOARD  
KANAWHA COUNTY, WEST VIRGINIA  
DAVIS CREEK  
SEWER CROSSING REPLACEMENT  
OVERALL LAYOUT SHEET

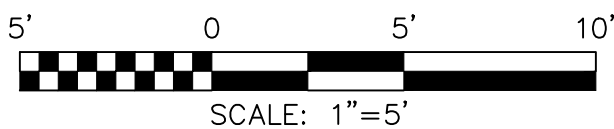
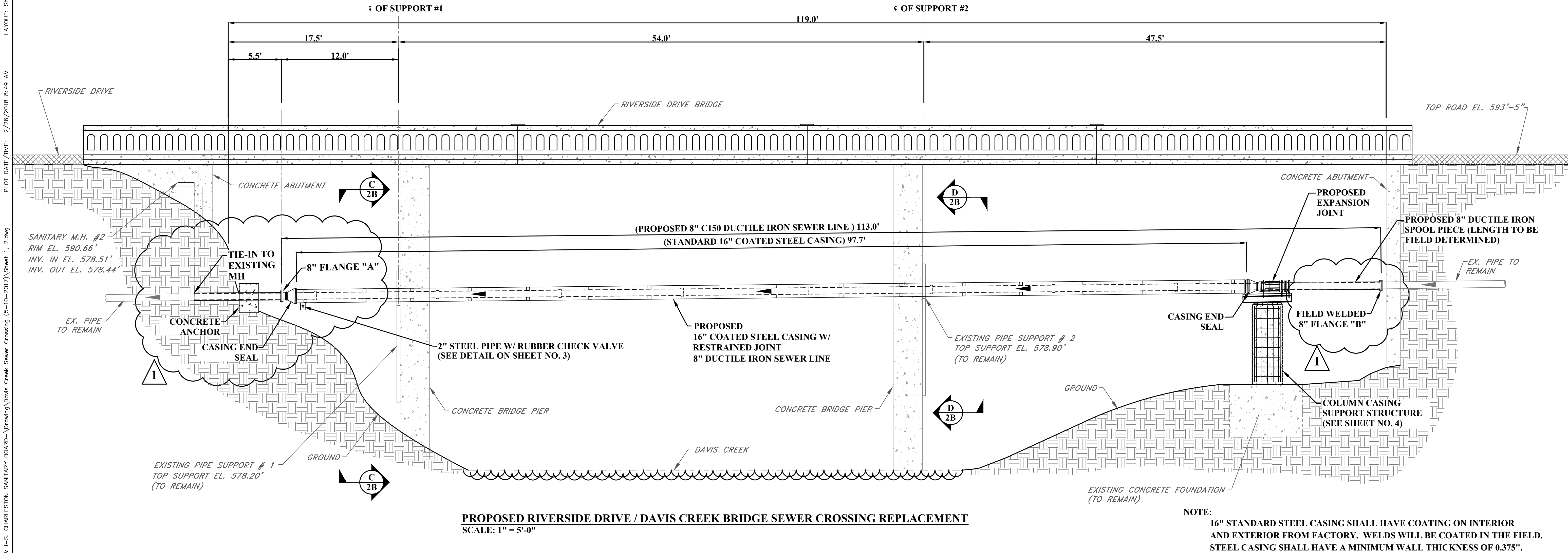
SHEET No.
LAYOUT

CAD FILE: R:\020-1470 RIVERSIDE AVE 1 & I-S- CHARLESTON SANITARY BOARD-Drawing\Davis Creek Sewer Crossing (5-10-2017)\Sheet 1, 2.dwg  
PLOT DATE/TIME: 2/26/2018 8:49 AM  
LAYOUT: Sheet 2  
USER: jason r. fisher

**SEQUENCE OF EVENTS:**

1. CALL MISS UTILITY 1-800-245-4848.
2. SOUTH CHARLESTON SANITARY BOARD WILL INSTALL AND MAINTAIN THE TEMPORARY BYPASS PUMPING FROM MANHOLE #1 TO MANHOLE #2. (DURATION OF 30 CALENDAR DAYS)
3. REMOVE THE EXISTING 8 5/8" O.D. SPIRAL WELDED STEEL GRAVITY SEWER LINE FROM EXISTING FLANGE #1 TO THE EXISTING COUPLER.
4. REMOVE C CHANNEL CROSS MEMBERS FROM THE EXISTING PIER MOUNTED PIPE SUPPORTS.
5. INSTALL THE COLUMN CASING SUPPORT STRUCTURE. COAT STEEL PER SPECIFICATION.
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14. INSTALL NEW UPPER C CHANNEL CROSS MEMBER ON THE EXISTING PIER MOUNTED PIPE SUPPORTS.
15. FABRICATE ROLLER ASSEMBLY.
16. INSTALL EXPANSION JOINTS ONTO THE SUPPORT PIER WITH ROLLERS.
17. BOLT THE EXPANSION JOINTS TO THE PROPOSED CARRIER PIPE WITH A MECHANICAL JOINT FLANGE ADAPTOR.
18. PLUG NEW INVERT IN MANHOLE #2 AND CAP THE EXPANSION JOINT. PERFORM PRESSURE TESTING.
19. CUT EXISTING 8" SPIRAL WELDED STEEL PIPE CLOSE TO THE BRIDGE ABUTMENT WINGWALL AND FIELD WELD AN 8" FLANGE ONTO THE EXISTING 8" SPIRAL WELDED STEEL.
20. INSTALL 8" DUCTILE IRON SPOOL PIECE FROM EXPANSION JOINT TO THE FIELD WLEDED FLANGE "B".
21. REMOVE TEMPORARY BYPASS PUMPING.
22. INSTALL END SEALS ON THE CASING.
23. SCRAPE, PRESSURE WASH AND RECOAT THE EXISTING PIER MOUNTED PIPE SUPPORTS AND EXISTING 8 5/8" O.D. SPIRAL WELDED PIPE PER SPECIFICATION 099010.
24. PERFORM FINAL CLEAN-UP.
25. CONDUCT SUBSTANTIAL COMPLETION WALK-THROUGH INSPECTION.
26. COMPLETE ALL PUNCH LIST ITEMS.
27. FINAL CLEANUP.



**ADDENDUM #1**

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1	JRF	2/26/18	ADDENDUM #1	
NO.	BY	DATE	DESCRIPTION	

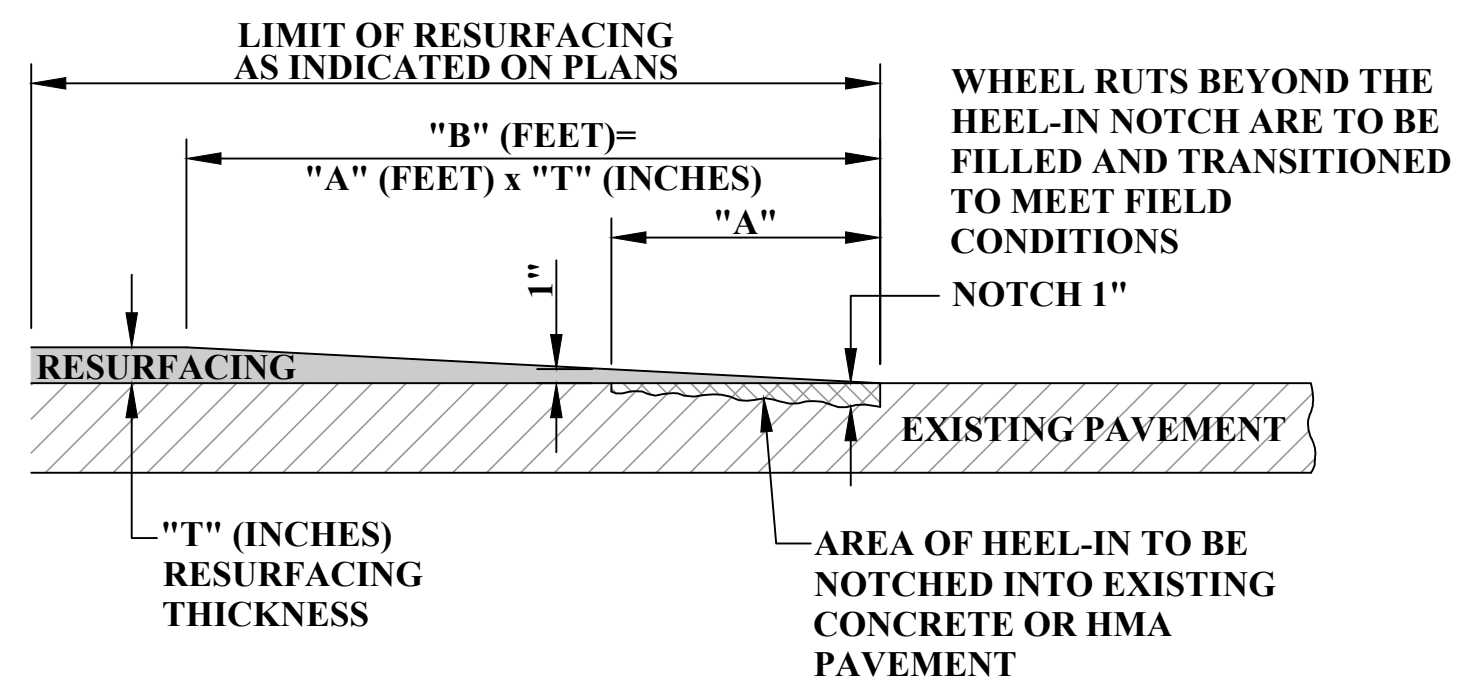
SCALE: 1:5	
DRAWN: B. QUERREY	DATE: MAY 2017
CHECKED: C. SMITH	DATE: MAY 2017
APPROVED: J. ARMSTRONG	DATE: MAY 2017
SURVEY DATE:	
SURVEY BY:	
FIELD BOOK No.:	

**THRASHER**  
300 ASSOCIATION DRIVE  
CHARLESTON, WV 25311  
www.thrashereng.com  
PHONE (304)-343-7601  
FAX (304)-343-7604

PHASE No.
CONTRACT No.
1
PROJECT No.
020-1470

SOUTH CHARLESTON SANITARY BOARD  
KANAWHA COUNTY, WEST VIRGINIA  
DAVIS CREEK  
SEWER CROSSING REPLACEMENT  
PROPOSED DUCTILE IRON PIPE REPLACEMENT

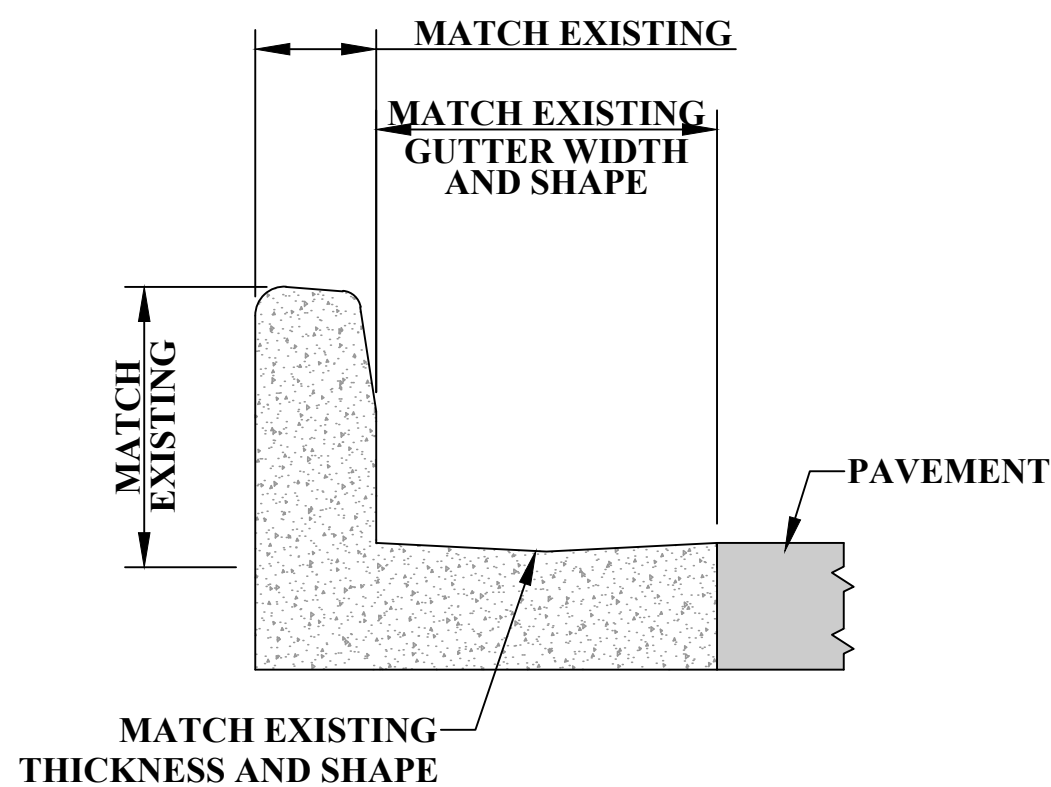
SHEET No.
2



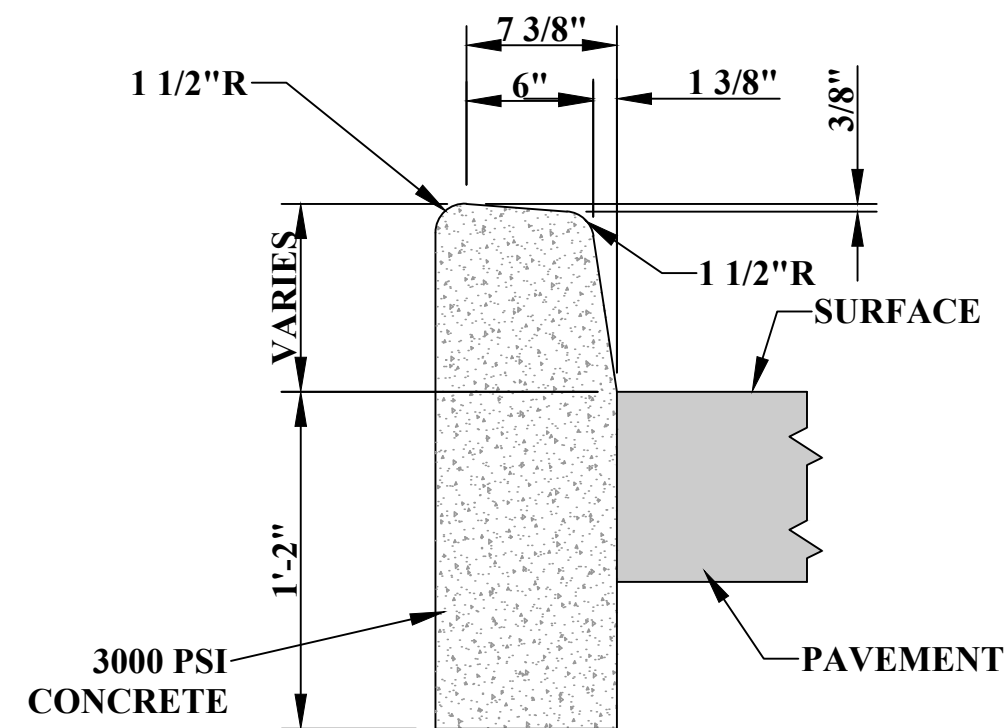
**NOTES: 1) PAYMENT FOR HEEL-INS TO BE INCLUDED  
IN THE COST OF RESURFACING.  
2) THIS DETAIL TO BE USED AT THE  
TERMINATION OF PROJECT.**

<b>POSTED SPEED LIMIT</b>	<b>"A"</b>
<b>25 MPH</b>	<b>12</b>
<b>30 TO 45 MPH</b>	<b>14</b>
<b>40 TO 45 MPH</b>	<b>16</b>
<b>50 TO 55 MPH</b>	<b>18</b>

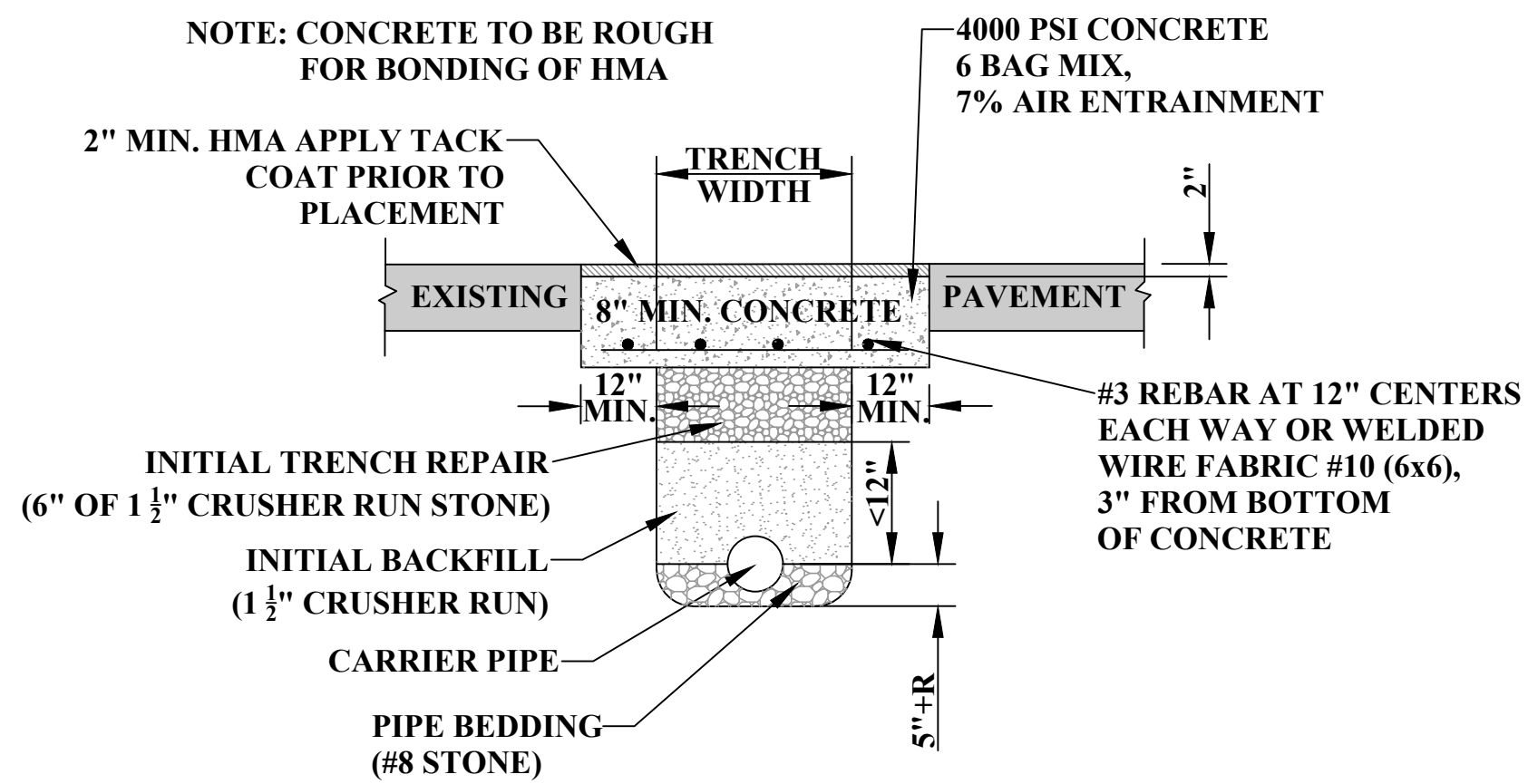
**RESURFACING HEEL-IN DETAIL**  
(FOR REPAIRS IF NECESSARY)  
NOT TO SCALE



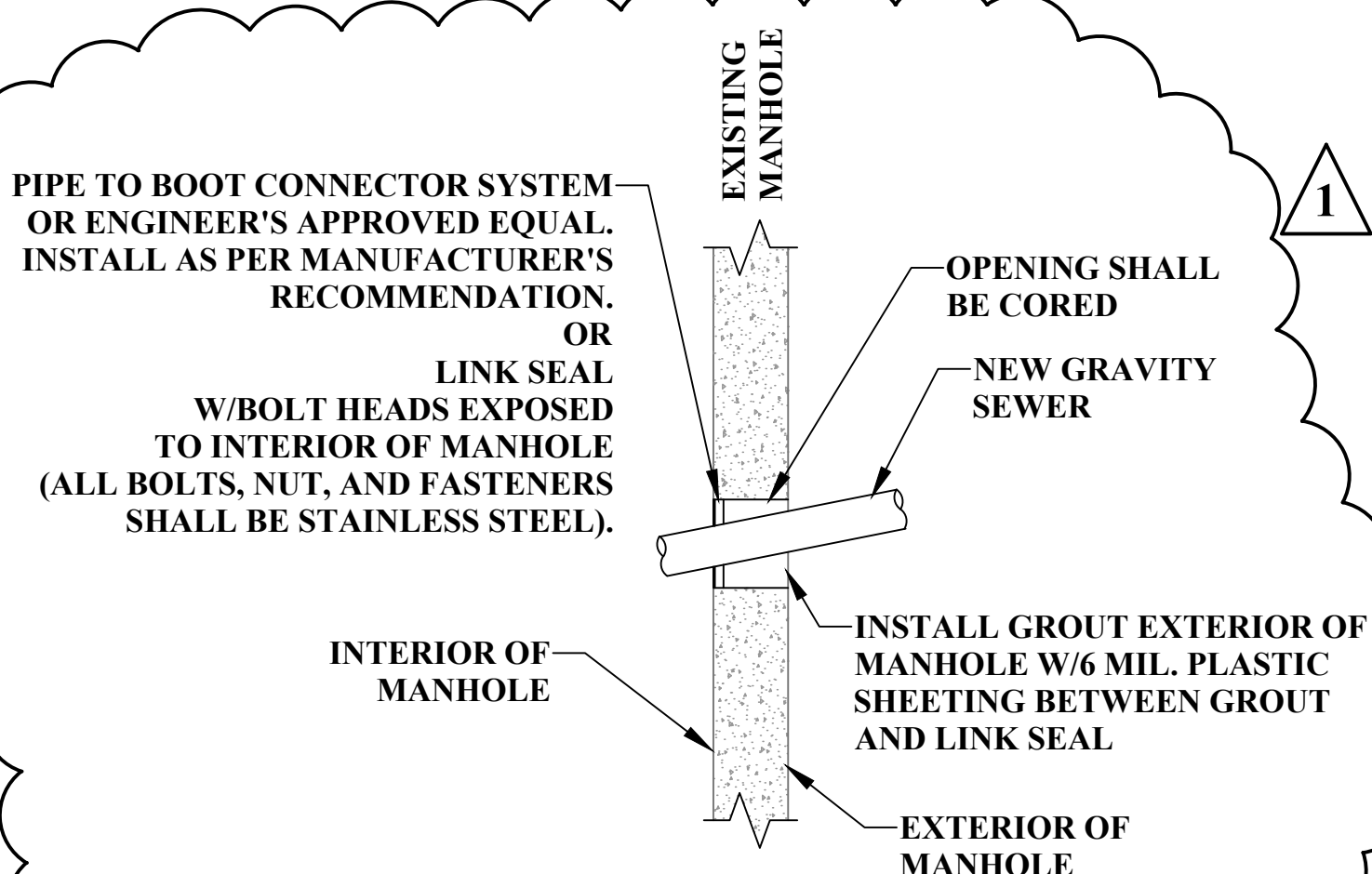
**CONCRETE CURB AND GUTTER REPAIR**  
(FOR REPAIRS IF NECESSARY)  
NOT TO SCALE



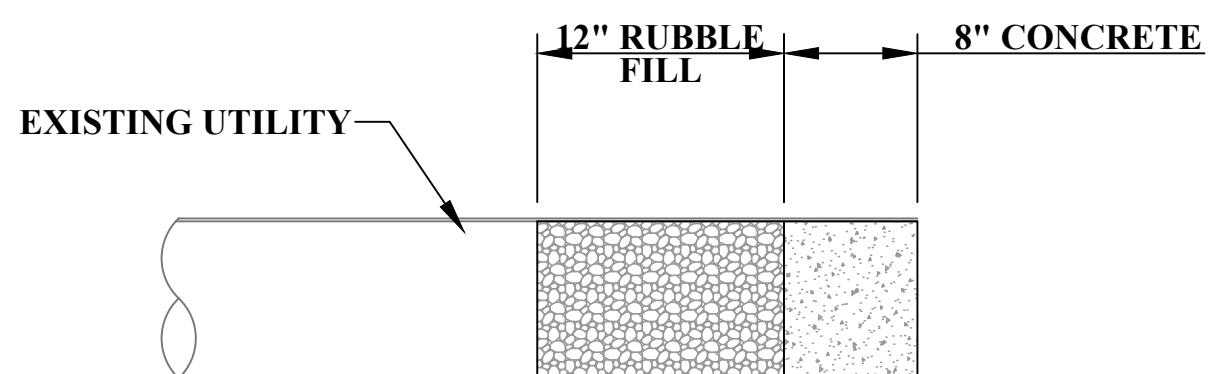
**CONCRETE CURBING**  
(FOR REPAIRS IF NECESSARY)  
NOT TO SCALE



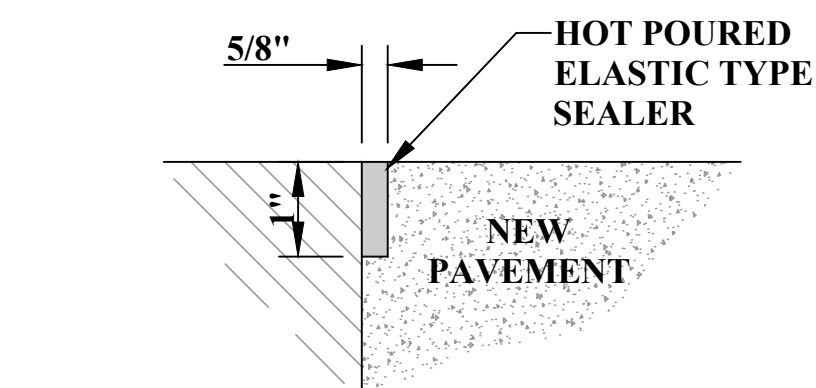
## TYPICAL TYPE "A" SHALLOW TRENCH (FOR REPAIRS IF NECESSARY)



**CONNECTION TO EXISTING MANHOLE DETAIL**  
NOT TO SCALE

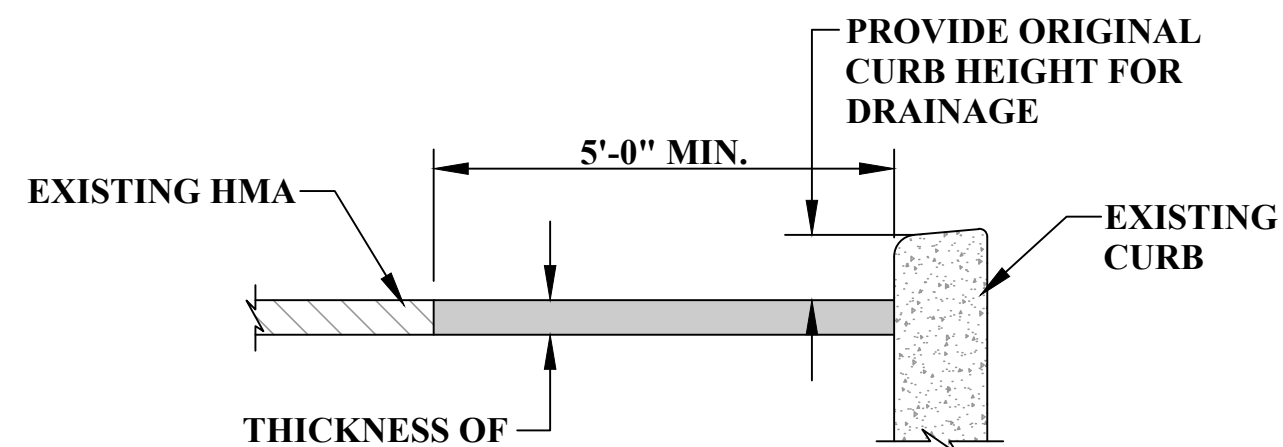


**GROUTING AND SEALING OF**  
**EXISTING UTILITY LINE**  
**(FOR REPAIRS IF NECESSARY)**  
**NOT TO SCALE**



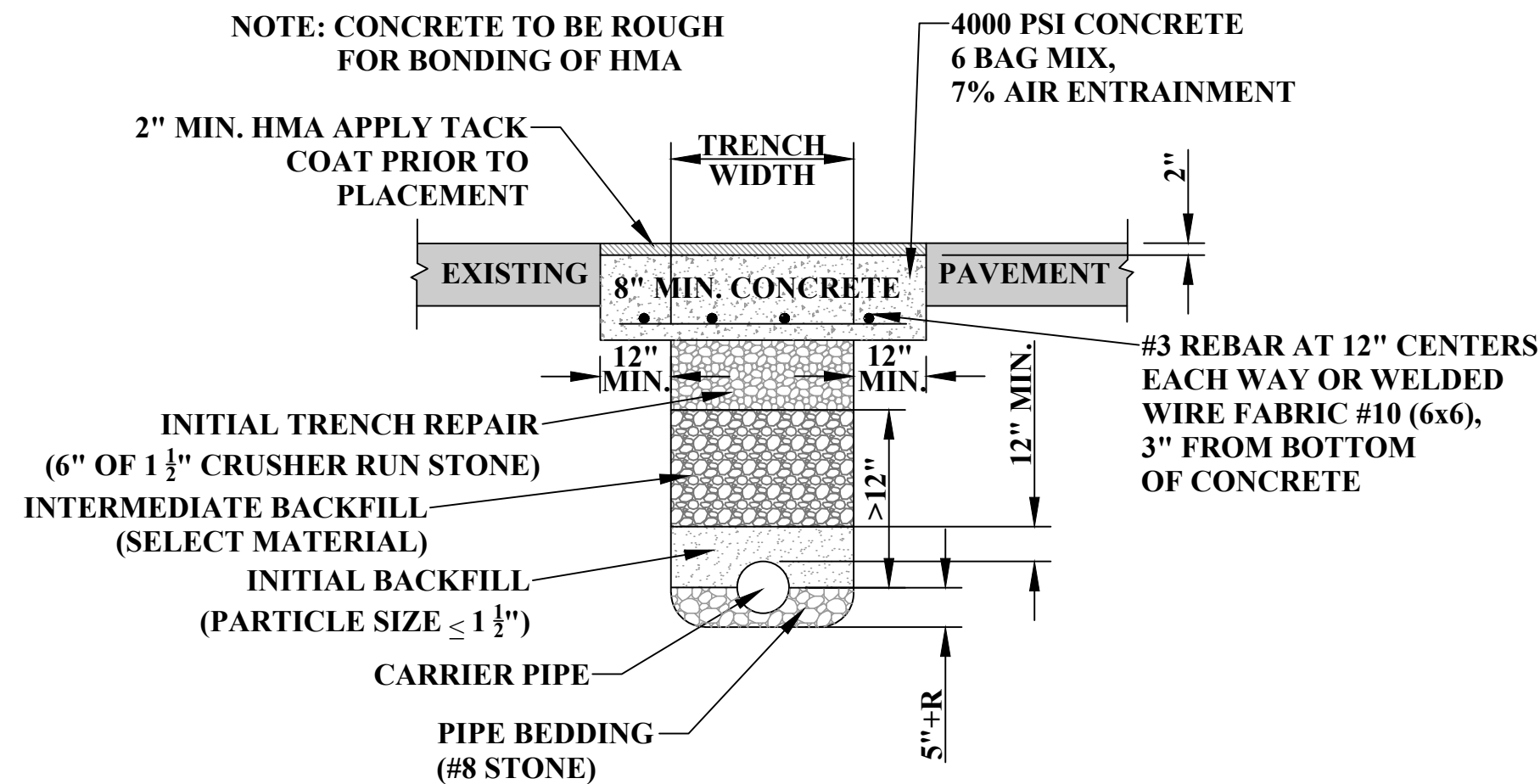
**NOTES: 1) EXISTING PAVEMENT TO BE SAWED  
LOAD TRANSFER PROVISIONS MAY BE  
REQUIRED.  
2) ALL CONCRETE TO BE A MINIMUM  
3000 PSI, 6 BAG MIX, AIR ENTRAINED.**

**JOINT SEALER DETAIL**  
(FOR REPAIRS IF NECESSARY)  
NOT TO SCALE



**NOTE: ALL MILLING AND GRINDING  
TO BE INCLUDED IN  
OVERLAY COST**

**MILL OR GRINDING DETAIL**  
(FOR REPAIRS IF NECESSARY)  
NOT TO SCALE



**TYPICAL TYPE "A" DEEP TRENCH**  
**(FOR REPAIRS IF NECESSARY)**

## TYPES OF "A" TRENCH REPAIR (FOR REPAIRS IF NECESSARY)

**NOT TO SCALE**  
**MIX PAVEMENT**  
**PRESENT AVERAGE DAILY TRAFFIC OVER**  
**2000 OR LOWER-VOLUME ROADS WITH**  
**HEAVY TRUCK TRAFFIC (20 PER DAY)**

**NOTES: 1) TRAFFIC IS TO BE MAINTAINED AT ALL TIMES BY THE USE OF APPROPRIATE TRAFFIC CONTROL DEVICES. USE OF METAL PLATES, HAVING SUFFICIENT RIGIDITY TO SPAN TYPE "A" TRENCH, IS REQUIRED TO PREVENT WHEEL LOADS FROM BEING TRANSMITTED TO THE CONCRETE FLOWABLE FILL. THE PLATES ARE TO BE SECURELY ANCHORED TO PREVENT MOVEMENT CAUSED BY TRAFFIC. THE PLATES ARE TO BE LEFT IN PLACE UNTIL THE CONTROLLED LOW STRENGTH MATERIAL HAS ATTAINED 50% OF ITS COMPRESSIVE STRENGTH.**

## ADDENDUM #1

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1	JRF	2/26/18	ADDENDUM #1
NO.	BY	DATE	DESCRIPTION



SCALE: NOT TO SCALE	
DRAWN: R. STOWERS	DATE: MAY 2017
CHECKED: C. SMITH	DATE: JANUARY 2018
APPROVED: D. FERRELL	DATE: JANUARY 2018
SURVEY DATE:	
SURVEY BY:	
FIELD BOOK No.:	



PHONE  
(304)-343-7601

PHASE No.
CONTRACT No.
1
PROJECT No.
020-1470

**SOUTH CHARLESTON SANITARY BOARD  
KANAWHA COUNTY, WEST VIRGINIA  
DAVIS CREEK  
SEWER CROSSING REPLACEMENT  
STANDARD DETAILS**

SHEET No.

**D-1**

**SOUTH CHARLESTON SANITARY BOARD  
1 ROCKCREST DRIVE BOX 8336  
SOUTH CHARLESTON, WV 25309  
Telephone # (304) 768-4140  
Fax # (304) 768-1639**

**DAVIS CREEK SEWER CROSSING REPLACEMENT PROJECT**

**THE THRASHER GROUP, INC.  
300 ASSOCIATION DRIVE  
CHARLESTON, WV 25311  
Telephone # (304) 343-7601  
Fax # (304) 343-7604**

**PRE-BID CONFERENCE AGENDA**

**February 21, 2018**

<b>PROJECT LOCATION:</b>	South Charleston, West Virginia
<b>ENGINEER'S PROJECT #:</b>	101-020-1470
<b>DATE OF CONFERENCE:</b>	February 21, 2018 at 10:00 A.M., LPT
<b>CONFERENCE LOCATION:</b>	<b>South Charleston Sanitary Board</b> 1 Rockcrest Drive Box 8336 South Charleston, WV 25309

## **PRE-BID AGENDA**

### **Introductions.**

**Sign-In Sheet:** Please sign.

**Funding for Project:** South Charleston Sanitary Board.

**Bid Date:** March 6, 2018, South Charleston Sanitary Board, South Charleston, WV,  
**10:00 AM.**

**Bid Packet:** Refer to Bid Packet for all documents required to be submitted with the Bid.

**Envelope 1:** Bid Opening Requirement Items (BOR): Bid Bond, Certification of Receipt of all Addendums, Drug Free Work Place Affidavit, West Virginia Contractor's License

**Envelope 2:** Bid Form. Envelope 2 shall be placed in Envelope 1.

***Note: no informalities will be waived during bidding. Any non-responsive bids will be rejected.***

**Bid Hold:** 90 Days, Bid Bond Required (5% of Bid)

**Retainage:** Shall be 10% until 50% complete, then reduced to 5% on WV Contractors and 6% on out of state Contractors.

### **Contract Times:**

Substantial Completion – 90 days  
Ready for Final Payment – 120 days.

**South Charleston B&O Tax:** 2%

**Contractor License:** West Virginia Contractor License is required to Bid  
City of South Charleston Contractor License is required to Award

**EJCDC Documents:** Are used on this project, version 2013.

**Refer to SGC for additional items to be included in the General Conditions of the Contract:**

**Permits:** All permits have been obtained by the Owner. Contractor's responsible for any and all fines.

**Working Hours:** Contractor's work schedule limited to 40 hours per week. Contractor may only work in excess of 40 hours with prior arrangements with the owner to cover Owner and Engineer's expenses. Greater than 40 hours per week is pre-approved while sewage is being bypass pumped.

**Traffic Control:** Traffic Control Plan shall be submitted in accordance with Specification Section 015700 and shall follow WVDOH permit requirements.

**Subcontracting:** Please refer to Page SGC-4, Item 8. The General Contractor shall be required to perform a minimum of fifty (50%) percent of the work on this contract with his own work force.

**Addendum No. 1:** Today's meeting notes, today's sign-in sheet, and information pertaining to additional footage of pipe to be replaces is to be issued in an addendum.

**Last Day for Questions:** February 27<sup>th</sup>, 2018.

**Project Description:**

Installation of approximately 130 LF of 8-inch ductile iron sewer pipe, approximately 100 LF of 16-inch Coated Steel Casing, steel and concrete supports, expansion joint, concrete anchor, one (1) tie-into existing manhole, erosion and sediment controls, site restoration, and all miscellaneous appurtenances as shown on the drawings, specified in the specifications and required for a complete and operational sewer system.

**Questions?**

**SOUTH CHARLESTON SANITARY BOARD  
KANAWHA COUNTY, WEST VIRGINIA  
PROPOSED  
DAVIS CREEK SEWER CROSSING REPLACEMENT**

**PRE-BID CONFERENCE  
Thursday, February 21, 2018**

**Thrasher Project #101-020-1470**

Name	Representing	Phone #	Email Address
<u>Tim Spradling</u>	<u>Benchmark Const</u>	<u>(304) 881-1735</u>	<u>Tim@BMCWV.com</u>
<u>JAKE HARPER</u>	<u>ORDERS CONSTRUCTION</u>	<u>304-722-4237</u>	<u>jakeh@ordersconstruction.com</u>
<u>Roger Hull</u>	<u>Hull's Contracting Inc.</u>	<u>304-472-6408</u>	<u>rhull@cebridge.net</u>
<u>Lauren Butcher</u>	<u>Riley Contracting, Inc.</u>	<u>419-668-8482</u>	<u>lawis@rileytrenchless.com</u>
<u>Richard Smiles</u>	<u>Fameo, Inc.</u>	<u>304-529-3328</u>	<u>rick.smiles@comcast.net</u>
<u>Dan Ferrell</u>	<u>Thrasher</u>	<u>704 288-7755</u>	<u>dferrell@Thrashereng.com</u>
<u>Corey Smith</u>	<u>Thrasher</u>	<u>304-641-2804</u>	<u>casmith@thrasher-eng.com</u>
<u>STEVE DEBARR</u>	<u>SCSB</u>	<u>304 553-9286</u> <u>cell</u>	<u>STEVEDEBARR@MSN.COM</u>

**Name**  
Tom Farnell

**Representing**  
Tribute Center

**Phone Number**  
304-208-3807

**Email Address**  
10a Cat 403 @ yAlgo