

December 13, 2019

Re: Frederick Sanitary Sewer Improvements  
Frederick, South Dakota  
A-6400

Bid Opening: December 17, 2019  
4:00 pm Local Time


## **ADDENDUM NUMBER 1**

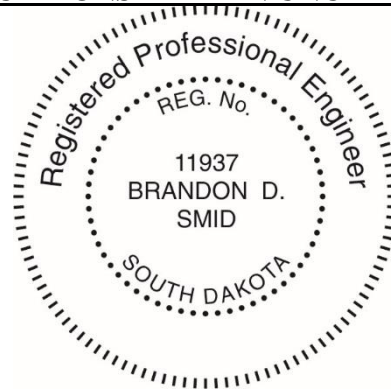
The following modifications become a part of the original plans and specifications, taking precedence over the items that may conflict. The bidder shall note receipt and make acknowledgement of the addendum on his bid form, incorporating its provisions in his bid.

### **CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS**

1. If dewatering is necessary on the project, it will not be paid for as a separate bid item. This shall be incorporated into cost of the project.
2. **PART 2- Construction Requirements, Division 32 00 00:** Add in the attached specifications for Section 32 12 13.13 and Section 32 12 16
3. **PART 2- Construction Requirements, Division 33 00 00, Section 33 01 30.71: Part 3.04.A-4, Strike out the last sentence**
4. **PART 2- Construction Requirements, Division 33 00 00, Section 33 05 26; Part 2.05.; Transition Couplings (Gravity Piping); Revision:**  
Add F. SADDLE WYES
  1. Manufactured to meet the requirements of ASTM D 5926
  2. Only implemented on sanitary sewer pipe to have CIPP Liner installed
  3. Pre-approved equal Fernco Flexible Tap Saddle TSW-4 or TSW-6
    - a. Installed according to Manufacturer's recommendations with accompanying TSPK-46 Tap Saddle Pressure Kit

**ALL OTHER ITEMS OF THE PLANS AND SPECIFICATIONS REMAIN UNCHANGED**

By:   
Brandon D. Smid, P.E.



PROJECT ENGINEER – HELMS & ASSOCIATES

**Acknowledge receipt of the Addendum by inserting its number on the Bid Form. Failure to do so may subject bidder to disqualification. This Addendum forms a part of the Contract Documents. It modifies them as above.**

# SECTION 32 12 13.13 - BITUMINOUS TACK COAT

## PART 1 GENERAL

### 1.01 RELATED DOCUMENTS

- A. The general provisions of the contract, including General and Supplementary Conditions shall apply to work covered in this section.
- B. Related requirements specified elsewhere:
  - 1. Asphalt Concrete Surfacing - Section 32 12 16

### 1.02 DESCRIPTION OF WORK

- A. This item shall consist of preparing and treating a bituminous surface with bituminous material in accordance with these specifications and in reasonably close conformity to the lines shown on the plans.

### 1.03 QUALITY ASSURANCE AND SUBMITTALS

- A. Samples of the bituminous material that the Contractor proposes to use, together with a statement as to its source and character, must be submitted and approved before use of such material begins. The Contractor shall require the manufacturer or producer of the bituminous material to furnish material subject to this and all other pertinent requirements of the contract. Only satisfactory materials so demonstrated by service tests, shall be acceptable.
- B. The Contractor shall furnish the vendor's certified test reports for each carload, or equivalent, of bituminous material shipped to the project. The report shall be delivered to the Engineer before permission is granted for use of the material. The furnishing of the vendor's certified test report for the bituminous material shall not be interpreted as a basis for final acceptance. All such test reports shall be subject to verification by testing samples of material received for use on the project.
- C. Before the final estimate is allowed, the Contractor shall file with the Engineer receipted bills when railroad shipments are made, and certified weigh bills when materials are received in any other manner, of the bituminous materials actually used in the construction covered by the contract. The Contractor shall not remove bituminous material from the tank car or storage tank until the initial outage and temperature measurements have been taken by the Engineer, nor shall the cart or tank be released until the final outage has been taken by the Engineer. Copies of freight bills and weigh bills shall be furnished to the Engineer during the progress of the work.

## **PART 2 PRODUCTS**

### 2.01 MATERIALS

- A. The bituminous material shall be either cutback asphalt, emulsified asphalt, or tar and shall conform to the requirements of Table 1. The type, grade, controlling specification, and application temperature of bituminous material to be used shall be specified by the Engineer.

<b>TABLE 1. BITUMINOUS MATERIAL</b>			
TYPE AND GRADE	SPECIFICATION	APPLICATION TEMPERATURE	
		DEG. F.	DEG. C
Emulsified Asphalt	ASTM D977	75-130	25-55
SS-1h, CSS-1h	ASTM D2397	75-130	25-55

## **PART 3 EXECUTION**

### 3.01 WEATHER LIMITATIONS

- A. The tack coat shall be applied only when the existing surface is dry and the atmospheric temperature is above 60 degrees F (15 degrees C). The temperature requirements may be waived, but only when so directed by the Engineer.

### 3.02 EQUIPMENT

- A. The Contractor shall provide equipment for heating and applying the bituminous materials.
- B. The distributor shall be designed, equipped, maintained, and operated so that bituminous material at even heat may be applied uniformly on variable widths of surface at the specified rate. The allowable variation from the specified rate shall not exceed 10 percent. Distributor equipment shall include a tachometer, pressure gages, volume-measuring devices, or a calibrated tank, and a thermometer for measuring temperatures of tank contents. The distributor shall be self powered and shall be equipped with a power unit for the pump and full circulation spray bars adjustable laterally and vertically.
- C. A power broom and/or blower shall be provided for any required cleaning of the surface to be treated.

### 3.03 APPLICATION OF BITUMINOUS MATERIAL

- A. Immediately before applying the tack coat, the full width of surface to be treated shall be swept with a power broom and/or air blast to remove all loose dirt and other objectionable material.
- B. Emulsified asphalt shall be diluted by the addition of water where directed by the Engineer and shall be applied a sufficient time in advance of the paver to ensure that all water has evaporated before any of the overlying mixture is placed on the tacked surface.

- C. The bituminous material including vehicle or solvent shall be uniformly applied with a bituminous distributor at the rate of 0.10 to 0.15 gallons per square yard (0.24 to 0.72 liters per square meter) depending on the condition of the existing surface. The type of bituminous material and application rate shall be approved by the Engineer prior to application.
- D. Following the application, the surface shall be allowed to cure without being disturbed for such period of time as may be necessary to permit drying out and setting of the tack coat. This period shall be determined by the Engineer. The surface shall then be maintained by the Contractor until the next course has been placed. Suitable precautions shall be taken by the Contractor to protect the surface against damage during this interval.

#### **PART 4 MEASUREMENT AND PAYMENT**

##### 4.01 METHOD OF MEASUREMENT

- A. The bituminous material for tack coat shall be measured to the nearest one-tenth (0.1) Ton. Water for emulsified asphalt will not be measured for payment.

##### 4.02 BASIS OF PAYMENT

- A. Separate payment will not be made. The Asphalt tack coat shall be incidental to the Asphalt Concrete Surfacing Bid Item. This price shall be preparation, delivery, and application of these materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

# **SECTION 32 12 16 - ASPHALT CONCRETE SURFACING**

## **PART 1 GENERAL**

### 1.01 RELATED DOCUMENTS

- A. The general provisions of the contract, including General and Supplementary Conditions shall apply to work covered in this section.
- B. Related requirements specified elsewhere:
  - 1. Bituminous Tack Coat – Section 32 12 13.13

### 1.02 DESCRIPTION OF WORK

- A. The work covered under these specifications shall include the furnishing of all labor, materials, and equipment necessary to lay a compacted asphalt concrete mat (at a depth as shown in the plans) complete in place, as specified herein.

### 1.03 SUBMITTALS

- A. The Contractor shall submit for review copies of all certificates from the manufacturer that the materials meet or exceed specified requirements.

### 1.04 QUALITY ASSURANCE

- A. The contractor shall provide the required control tests of the mineral aggregate for the asphalt surfacing. The cost is considered incidental to the project.
- B. The contractor shall provide the required job mix, prepared by an independent testing laboratory approved by the Engineer for the Class E, Type 1 Asphalt concrete to the Engineer/Owner 14 days prior to start of production. The cost of the job mix designs shall be paid for by the Contractor and are considered incidental to the project.
- C. Following the Engineer's approval of the above-mentioned tests, all remaining tests shall be performed by the Owner's representative with results being given to both the Contractor and the Owner.

## **PART 2 PRODUCTS**

### 2.01 GENERAL

- A. Specifications to be used for this section shall be the South Dakota Department of Transportation Standard Specifications for Roads and Bridges, 2015 Edition, Division III Materials Details with the following modifications, and/or special provisions.
  - 1. Where the term Engineer, Area Engineer, Department, etc., is used it shall be replaced with Helms and Associates, Owner etc. as applicable.
  - 2. The shale content or other particles of low specific gravity (less than 1.95) passing the No. 4 sieve shall not exceed four (4) percent.

### 2.02 ASPHALT CONCRETE

- A. The construction requirements and material handling shall conform to the requirements of Section 320.3, Section 880, and Section 890 of the South Dakota Department of Transportation Standard Specifications for Roads and Bridges, 2015 edition.
- B. Mineral aggregate for asphalt concrete shall conform to the requirements of the standard specifications for Class E, Type I. The asphalt cement shall be PG 64-22 or PG 64-28. The Contractor shall provide a job mix formula with the supporting mix design data prior to production.
- C. A bituminous tack coat (SS-1H or CSS-1H) shall be applied between each lift at a rate of 0.10 to 0.15 gallon per square yard. The bituminous tack coat will be incidental to the asphalt street repair.

### **PART 3 EXECUTION**

#### **3.01 GENERAL**

- A. The construction requirements and material handling shall conform to the requirements of Section 320.3, Section 880, and Section 890 of the South Dakota Department of Transportation Standard Specifications for Roads and Bridges, 2015 Edition, except as modified hereinafter.
  - 1. Where the term Engineer, Area Engineer, Department, etc. is used it shall be replaced Helms and Associates, Owner etc. as applicable.

#### **3.02 ASPHALT CONCRETE SURFACE**

- A. Asphalt concrete surfaces will be replaced in the areas as designated by the Owner and Engineer.
- B. Placement of asphalt concrete surfaces shall be on a compacted layer of granular base course. The compacted thickness of asphalt concrete shall be as shown on the plans or as directed by the Owner and Engineer.
- C. The contractor shall adjust and cover all manholes and valve boxes, prior to tack coat application, with material approved by the Engineer.

#### **3.03 GENERAL**

- A. The Asphalt Concrete Paving equipment, weather limitations, job mix formula, mixing, construction methods, compaction, finishing, tolerance, and protection shall conform to the requirements of the appropriate sections of the State Highway Specifications for the type of material specified.

#### **3.04 MIXING ASPHALTIC CONCRETE MATERIALS**

- A. Provide hot plant-mixed asphaltic concrete paving materials.
  - 1. Temperature leaving the plant: 143 degrees C(290 degrees F) minimum, 160 degrees C(320 degrees F) maximum.
  - 2. Temperature at time of placing: 138 degrees C(280 degrees F) minimum.

#### **3.05 SUBGRADE**

- A. Shape to line and grade and compact with self-propelled rollers.
- B. All depressions that develop under rolling shall be filled with acceptable material and the area re-rolled.

- C. Soft areas shall be removed and filled with acceptable materials and the area re-rolled.
- D. Should the subgrade become rutted or displaced prior to the placing of the subbase, it shall be reworked to bring to line and grade.
- E. Proof-roll the subgrade as directed by Engineer. If pumping, pushing, or other movement is observed, rework the area to provide a stable and compacted subgrade.

### 3.06 BASE COURSES

#### A. Base

1. Spread and compact to the thickness shown on the drawings.
2. Rolling shall begin at the sides and continue toward the center and shall continue until there is no movement ahead of the roller.
3. After completion of the base rolling there shall be no hauling over the base other than the delivery of material for the top course.

B. Thickness tolerance: Provide the compacted thicknesses shown on the Drawings within a tolerance of minus 0.0mm (0.0") to plus 12.7mm (0.5").

C. Moisture content: Use only the amount of moisture needed to achieve the specified compaction.

### 3.07 PLACEMENT OF ASPHALTIC CONCRETE PAVING

A. Remove all loose materials from the compacted base.

B. Apply the specified prime coat, and tack coat where required, and allow to dry in accordance with the manufacturer's recommendations as approved by the Architect or Engineer.

C. Receipt of asphaltic concrete materials:

1. Do not accept material unless it is covered with a tarpaulin until unloaded, and unless the material has a temperature of not less than 130 degrees C(280 degrees F).
2. Do not commence placement of asphaltic concrete materials when the atmospheric temperature is below 10 degrees C (50 degrees F), not during fog, rain, or other unsuitable conditions.

D. Spreading:

1. Spread material in a manner that requires the least handling.

E. Rolling:

1. After the material has been spread to the proper depth, roll until the surface is hard, smooth, unyielding, and true to the thickness and elevations shown on the drawings.
2. Roll in at least two directions until no roller marks are visible.
3. Finished paving smoothness tolerance:
  - a. No depressions which will retain standing water.
  - b. No deviation greater than 3mm in 1.8m (1/8" in six feet).

### 3.08 PROTECTION

A. Protect the asphaltic concrete paved areas from traffic until the sealer is set and cured and does not pick up under foot or wheeled traffic.



### 3.09 FINAL CLEAN-UP

A. Remove all debris, rubbish, and excess material from the work area.

## **PART 4 MEASUREMENT AND PAYMENT**

### 4.01 METHOD OF MEASUREMENT

A. Asphalt Street Repair:

1. The removal and disposal of asphalt concrete shall be considered incidental to the piping installation.
2. Maximum limits of pay for "Asphalt Street Repair" shall be a width of fifteen (15) feet by the length of trench. The maximum limits for structures shall be 15 feet to either side of structure.
3. The depth of asphalt concrete replaced shall be as shown on the plans.

B. Asphalt material shall be measured and paid to the nearest 0.01 ton used, as verified by Engineer's inspection and refinery tickets. Asphalt material shall be PG 64-22 or PG 64-28.

C. Asphalt Concrete Class E, Type 1 shall be measured and paid for on a per ton basis. Payment at the unit price bid shall be full compensation for all labor, equipment, materials, and any incidental work required to properly mix, haul, and lay a compacted asphalt concrete mat, of the thickness as shown on plans, complete in place, as specified herein.

D. Compaction samples shall be considered incidental to the paving operations and shall be furnished by the Contractor when requested by the Engineer.

### 4.02 BASIS OF PAYMENT

A. Asphalt Street Repair:

1. No direct payment will be made for the removal and disposal of asphalt concrete, unless call for on the plans.
2. Payment for Asphalt Street Repair shall be per 0.01 ton.
3. **All scale tickets for the asphalt concrete shall be shall be given to the Engineer at time of delivery or by end of the working day in order to be paid. Tickets not in possession of the Engineer will not be considered and no payment will be made for the material.**

B. Asphalt material shall be paid at the contract unit price per ton as shown in the bid form.

C. Asphalt Concrete Class E, Type 1 shall be paid at the contract unit price per ton as shown in the bid form.

D. Compaction samples shall be considered incidental with no separate payment made.

\* \* \* END OF SECTION \* \* \*