

**SMITHERS SANITARY BOARD  
FAYETTE COUNTY, WEST VIRGINIA**

**CONTRACT #1 – PHASE II SANITARY SEWER AND STORMWATER SEPARATION  
PROJECT**

**ADDENDUM #3**

**OCTOBER 28, 2021**

**THRASHER PROJECT #020-01410**

TO WHOM IT MAY CONCERN:

The following are clarifications and responses to questions posed by contractors for the above reference project.

**A. GENERAL**

1. Bids will be received by The Thrasher Group, Inc. on behalf of the Smithers Sanitary Board at the offices of The Thrasher Group, Inc. located at 300 Association Drive, Charleston, West Virginia 25311. Bids shall be mailed or hand-delivered by **November 4, 2021 at 2:00 p.m.** to be considered. The Bid opening will be held via conference call, Call-in Number: 646-558-8656; Meeting ID Number: 864 9915 9352, and Zoom Meeting at the following address: <https://us02web.zoom.us/j/86499159352>.
2. Addenda must be acknowledged by signature on the Certification of Receipt of Addenda form included in the Bid Opening Requirements.
3. The Bid Form has been revised to modify the bid quantities. The revised Bid Form is included with this Addendum #3. **YOU MUST USE THE REVISED BID FORM WHEN PREPARING YOUR BID PACKAGE FOR THIS PROJECT.**
4. Updated Wage Rates are included with this Addendum #3. **YOU MUST USE THE ATTACHED WAGE RATES INCLUDED WITH THIS ADDENDUM #3 WHEN PREPARING YOUR BID PACKAGE.**

**B. SPECIFICATIONS**

1. **REPLACE** Section 012000 – Price and Payment Procedures included with this Addendum #3.

**C. DRAWINGS**

1. **REPLACE** Sheet 3A included with this Addendum #3.
2. **INSERT** Sheet 6 included with this Addendum #3.
3. **INSERT** Sheet DET-6 included with this Addendum #3.

**D. QUESTIONS AND RESPONSES**

**QUESTION**

1. Does the owner have or know of a location for an office trailer/storage lot? If so, will you provide contact information for the owner of the lot(s)?

**RESPONSE**

1. The owner does not own a location that would be suitable for an office trailer/storage lot.

**QUESTION**

2. Does the owner have or know of a location to dump/waste excess materials taken from excavations?

**RESPONSE**

2. The owner does not own a location that would be suitable for excess materials taken from excavation.

**QUESTION**

3. Are any B&O Taxes and/or local fees required for this contract and if so, what are the costs for these items?

**RESPONSE**

3. Yes, B&O Tax shall be 1%.

**QUESTION**

4. There are currently several supply chain issues that will affect this project especially the pricing and availability of PVC and Ductile Iron Pipe and fittings. Our suppliers can't hold the pricing on the pipe and are saying the price is good on the day of the quote only. As you know there is a 90 day hold on the bid and at this time we cannot hold our prices for that long because of the material pricing issues. The availability of the pipe and fittings is also an issue. Currently, the suppliers are giving us delivery times of several months for the piping materials. Obviously, we will need to know how these issues will be dealt with. Will we be given a change order for a price increase if, at the time of award and after we receive approved submittals, we cannot purchase the materials for the same price that we used in our bid. Will we be given a time extension if we cannot obtain pipe within a reasonable time period since this situation is out of our control?

**RESPONSE**

4. The Engineer will consider a Change Order for a change in material price only from the bid date to the date of contract award. The Contractor will be responsible for documenting the material price change for review by both the Engineer and funding agency. The Engineer will consider a time extension should obtaining pipe in a reasonable time frame become an issue.

**QUESTION**

5. What are the requirements for working on the railroad property?

**RESPONSE**

5. Documentation provided by the railroad companies pertaining to requirements of the work are included with this addendum. It is the Contractors responsibility to adhere to all requirements set forth by the Norfolk Southern and WATCO.

**QUESTION**

6. Has a railroad permit been obtained?

**RESPONSE**

6. Yes, Railroad permits have been obtained from both Norfolk Southern and WATCO.

**QUESTION**

7. Is the contractor required to provide any railroad insurance?

**RESPONSE**

7. Yes. Please see the insurance requirements included with this addendum.

**QUESTION**

8. Who will be responsible for the railroad track monitoring, and will there be any charges that the contractor will need to include in the bid?

**RESPONSE**

8. Contractor shall coordinate construction inspection with Norfolk Southern and WATCO. The contractor shall be responsible for any inspection fees associated with construction.

**QUESTION**

9. What wall thickness for the casing will be required? There is not any thickness shown in the chart on the plans for 36" steel casing and nothing indicates that the thickness' shown are what are required by the railroad.

**RESPONSE**

9. The railroad permits and related requirements are included with this addendum.

**QUESTION**

10. Will any of the sewer pipe be installed within the railroad rights of ways?

**RESPONSE**

10. Yes.

**QUESTION**

11. Are there any additional requirements for installing the sanitary and/or storm sewer pipe within the railroad rights of ways?

**RESPONSE**

11. The railroad permits and related requirements are included with this addendum.

**QUESTION**

12. Note 3 on the Index page under NS Railroad Notes references shoring, what type of shoring will we be required to include in our bid for work on the railroad property?

**RESPONSE**

12. The railroad permits and related requirements are included with this addendum.

**QUESTION**

13. Will any of the work be in the Theoretical Zone of Influence where piling will be required to be installed when working within the railroad rights of ways?

**RESPONSE**

13. The railroad permits and related requirements are included with this addendum.

**QUESTION**

14. Will you provide a pipe trench detail for the sanitary sewers, both PVC and DIP, and for the storm sewers?

**RESPONSE**

14. No.

**QUESTION**

15. What aggregate type, i.e., 57's, #8's, crusher run, bank run sand, etc., will be required for bedding, initial backfill and subsequent backfill?

**RESPONSE**

15. The aggregate type shall depend on the location of the pipe installed and may include any of the types listed in the question.

**QUESTION**

16. The specifications states that select granular backfill will be used under all improved areas, will you add a bid item per ton or cubic yard for this backfill requirement?

**RESPONSE**

16. Backfill shall be included in the price of the items installed, as described in Section 012000 - Price and Payment Procedures.

**QUESTION**

17. The specs state that the pipe will be measured for payment from face of structure to face of structure, do the pipe lengths and percent grade reflect that measurement or are they measured from center of structure to center of structure?

**RESPONSE**

17. Pipe lengths shall be measured in the horizontal plane without respect to grade.

**QUESTION**

18. Will any existing pipe be removed and replaced by the new sewers, it is difficult to tell on the plans where the existing pipe is located in comparison to the proposed pipes?

**RESPONSE**

18. Yes, some of the new lines shall include the removal of existing line. These are most easily identified as lines with multiple manholes or drop inlets called out as "remove and replace."

**QUESTION**

19. Will any bypass pumping of sewers be required, if so, will you provide flow rates for pumping?

**RESPONSE**

19. It will be the contractor's responsibility to maintain normal operation of the sanitary and storm sewer systems throughout construction.

**QUESTION**

20. We are required to reconnect existing customer services on this project and we cannot disrupt the flow of sewer to the customers. How will the lateral lines stay in service while we test the system, or will the testing requirements be waived?

**RESPONSE**

20. The existing collection system will remain in operation during construction. Once the new sanitary sewer lines are installed and tested, the contractor can then tie the existing customers into the newly installed sanitary sewer lines.

**QUESTION**

21. Will you provide bid items for the various size and types of service wyes?

**RESPONSE**

21. Yes. The Bid Form has been updated to include Bid Items 41-43 for size and types of service wyes.

**QUESTION**

22. Will there be any lateral connections to the proposed storm sewers?

**RESPONSE**

22. No.

**QUESTION**

23. Is a customer cleanout required for each customer service reconnection?

**RESPONSE**

23. No.

**QUESTION**

24. Will you provide a detail of a description of the customer service cleanouts that will be installed on the ductile iron service lines?

**RESPONSE**

24. No.

**QUESTION**

25. Will you provide a bid item for drop manhole connections?

**RESPONSE**

25. Drop connections will be included in the price of manholes as stated in Section 012000 – Price and Payment Procedures.

**QUESTION**

26. There are details for 3 different types/sizes of drop inlets. Will you provide bid items for each type to be used and will you show and/or list which type/size will be used at each inlet location?

**RESPONSE**

26. The drop inlets currently shown on Drawings are all Type “G.”

**QUESTION**

27. The type of grates to use are shown for the Type “B” and Type “G” drop inlets but not for the other type/size, will you provide the grate and/or frame that we will need to use for these inlets?

**RESPONSE**

27. Types “B” and “G” are the only types of drop inlets detailed in the Drawings.

**QUESTION**

28. Do the storm sewer manholes require boots (flexible pipe to manhole connectors)?

**RESPONSE**

28. Yes.

**QUESTION**

29. What are the diameters and depths of each of the manholes to be regouted?

**RESPONSE**

29. Details of the manholes to be regouted have been added to Sheet 6 included with this addendum.



**QUESTION**

30. Will you provide a spec for the type of grouting material/system/method that will be used for this work?

**RESPONSE**

30. Grouting work shall be as conducted as described in Section 036000.

**QUESTION**

31. What diameter are the existing pipes coming into and out of the manholes to be grouted and how many are there in each manhole?

**RESPONSE**

31. Details of the manholes to be regouted have been added to Sheet 6 included with this addendum.

**QUESTION**

32. Will you provide a Type "A" Trench Repair detail that also includes the full width overlay?

**RESPONSE**

32. A Detail has been added to Sheet 6 included with this addendum.

**QUESTION**

33. It appears that the streets where the Full Width HMA Overlay with Type "A" Trench Repair will also be milled to full width. Do the streets that only have a 2" Full Width HMA overlay get milled as well?

**RESPONSE**

33. No.

**QUESTION**

34. Can the local streets be closed to through traffic in order to perform the work required?

**RESPONSE**

34. Yes.

**QUESTION**

35. Can the streets remain closed to through traffic when work is not being done on them, i.e., adverse weather days, nights, weekends, holidays, Friday's after we have worked 40 hours Monday through Thursday, etc.?

**RESPONSE**

35. No.

**QUESTION**

36. The work on Line S5 in Michigan Avenue will open cut the entire width of the street. Will we be able to close that street until the casing is installed or will we need to install half the crossing at a time to allow traffic to go by? If we can completely close the street is there a time limit on how long it can be closed?

**RESPONSE**

36. That section of Michigan Avenue must remain open to traffic.

**QUESTION**

37. Will inside drop connections need to be built for storm sewer pipes drops into the manhole?

**RESPONSE**

37. No.

**QUESTION**

38. When we remove and replace MH 1-1, we may need to replace a portion of the effluent pipe and tie it back into the manhole. What material and diameter is the existing effluent pipe at this manhole and what material and diameter of pipe will it be replaced with?

**RESPONSE**

38. Based on the Record Drawings, the existing effluent pipe is 8" AC. Contractor shall field verify prior to installation.

**QUESTION**

39. It appears on Sheet 2 of the plans that there is a side line coming in to or through proposed Manhole 1-2 from the south. What are we doing with that line? If we are reconnecting it to the proposed manhole, we will need to know what material and diameter is the existing pipe and what material and diameter of pipe will it be replaced with?

**RESPONSE**

39. Based on the Record Drawings, the existing influent pipe is 8" AC. Contractor shall field verify prior to installation.

**QUESTION**

40. Will you provide a profile of Line S8?

**RESPONSE**

40. A profile has been added. Please see Plan Sheet 2A included with this addendum.

**QUESTION**

41. Will you please confirm that the quantities for all Bid Items are correct?

**RESPONSE**

41. The project shall be bid per the quantities on the revised Bid Form.

**QUESTION**

42. Bid Item 6 calls for 14" HDPE Pipe, it is not available can 15" be substituted?

**RESPONSE**

42. 15" HDPE may be installed as an alternate if all other requirements are determined to be acceptable during submittal phase.

**QUESTION**

43. Bid Item 25 is Remove & Replace Drop Inlets, is this intended for the existing Drop Inlets to be removed and reused in the project work, or removed and replaced with NEW Inlets?

**RESPONSE**

43. Existing drop inlets shall be removed and replaced with new drop inlets.

**QUESTION**

44. Do Davis Bacon Wage Rates Apply?

**RESPONSE**

44. Yes. Updated Wage Rates are included with this Addendum.

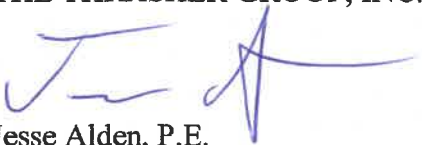
**E. CLARIFICATIONS**

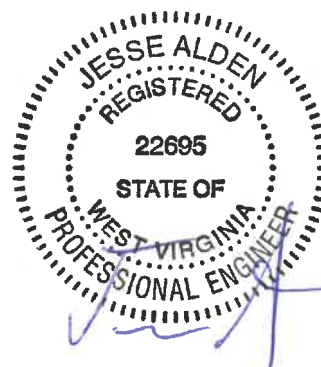
1. NOT APPLICABLE

If you have any questions or comments, please feel free to contact me at your earliest convenience. As a reminder, bids will be received until 2:00 p.m. on Thursday, November 4<sup>th</sup>, 2021 at The Thrasher Group, Inc. located at 300 Association Drive, Charleston, Kanawha County, WV. The Bid opening will be held via conference call, Call-in Number: 646-558-8656; Meeting ID Number: 864 9915 9352, and Zoom Meeting at the following address: <https://us02web.zoom.us/j/86499159352>. Good luck to everyone and thank you for your interest in the project.

Sincerely,

THE THRASHER GROUP, INC.

  
Jesse Alden, P.E.  
Project Manager



10-28-2021

SMITHERS SANITARY BOARD  
FAYETTE COUNTY, WEST VIRGINIA  
PROPOSED

CONTRACT #1 – PHASE II SANITARY SEWER AND STORMWATER  
SEPARATION PROJECT  
THRASHER PROJECT #020-01410

BID FORM

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:  
*Smithers Sanitary Board  
2 Greyhound Lane  
Smithers, WV 25186*

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 90 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface

structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

- E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.
- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

#### **ARTICLE 4 – BIDDER'S CERTIFICATION**

##### **4.01 Bidder certifies that:**

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
  - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
  - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
  - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

**ARTICLE 5 – BASIS OF BID**

**GENERAL**

The Bidder shall take notice of and shall be responsible for any local or state taxes levied and applicable, and the cost for the same shall be included as part of the submitted Bid.

The total Bid cost stated includes a complete operating installation including furnishing and installation of any and all changes or additions in plans, piping, mechanical work, additional electrical work, accessories, controls, etc. necessary to accommodate alternative equipment systems or materials used in construction.

**BID PROPOSAL**

The Bidder agrees to perform all required Work described in the detailed Specifications and as shown on the Plans for the complete construction and placing in satisfactory operation the Phase II Sanitary Sewer and Stormwater Separation Project. The Project "Sequence of Construction" has been detailed in the Drawings and Specification Division 1, Project Summary, Section 011000. The Bidder agrees to perform all the Work proposed for the total of the following Bid prices.

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

**PROPOSED  
CONTRACT #1 – PHASE II SANITARY SEWER AND STORMWATER  
SEPARATION PROJECT  
FOR THE  
  
SMITHERS SANITARY BOARD  
FAYETTE COUNTY, WEST VIRGINIA  
  
THRASHER PROJECT #020-01410**

**BID SCHEDULE**

***NOTE: Bid UNIT PRICE amounts are to be shown in both words and figures. In case of discrepancy, the amount shown in words will govern. Bids shall include sales tax and all other applicable taxes and fees.***

Item	Quantity	Description with Unit Price Written	Unit Price	Total Price
1	1 LS	Mobilization/Demobilization		
			Dollars	
			Cents	

**ADDENDUM NO. 3**

<b>Item</b>	<b>Quantity</b>	<b>Description with Unit Price Written</b>	<b>Unit Price</b>	<b>Total Price</b>
2	1 LS	Erosion and Sediment Control	Dollars Cents	
3	1 LS	Videotaping of Project Area	Dollars Cents	
4	570 LF	24" HDPE Storm Sewer Line	Dollars Cents	
5	305 LF	15" HDPE Storm Sewer Line	Dollars Cents	
6	655 LF	14" HDPE Storm Sewer Line	Dollars Cents	
7	275 LF	12" HDPE Storm Sewer Line	Dollars Cents	
8	25 LF	10" HDPE Storm Sewer Line	Dollars Cents	
9	950 LF	8" PVC SDR-35 Gravity Sewer Line	Dollars Cents	
10	305 LF	6" PVC SDR-35 Gravity Sewer Line	Dollars Cents	
11	1,165 LF	8" D.I. Gravity Sewer Line	Dollars Cents	



**ADDENDUM NO. 3**

<b>Item</b>	<b>Quantity</b>	<b>Description with Unit Price Written</b>	<b>Unit Price</b>	<b>Total Price</b>
12	260 LF	4" PVC Service Lateral Piping	Dollars Cents	
13	175 LF	4" D.I. Service Lateral Piping	Dollars Cents	
14	85 LF	36" Steel Casing (Bore & Jack)	Dollars Cents	
15	125 LF	16" Steel Casing (Bore & Jack)	Dollars Cents	
16	25 LF	30" Steel Casing (Open Cut)	Dollars Cents	
17	35 LF	24" Steel Casing (Open Cut)	Dollars Cents	
18	25 LF	20" Steel Casing (Open Cut)	Dollars Cents	
19	25 EA	48" Diameter Manhole Base, Cone Top, Watertight Casting & Lid	Dollars Cents	
20	1 EA	Remove & Replace 48" Diameter Manhole Base, Cone Top, Watertight Casting & Lid	Dollars Cents	

Item	Quantity	Description with Unit Price Written	Unit Price	Total Price
21	10 EA	48" Diameter Storm Manhole Base, Cone Top & Lid	Dollars Cents	
22	1 EA	Remove Existing Drop Inlet & Replace with 48" Diameter Storm Manhole Base, Cone Top & Lid	Dollars Cents	
23	2 EA	RegROUT Existing Manhole	Dollars Cents	
24	10 EA	New Drop Inlet	Dollars Cents	
25	15 EA	Remove & Replace Drop Inlet	Dollars Cents	
26	35 VF	48" Diameter Manhole Riser Pipe	Dollars Cents	
27	2 EA	8" Gravity Terminal Line Cleanout	Dollars Cents	
28	1 EA	6" Gravity Terminal Line Cleanout	Dollars Cents	
29	2 EA	Connect to Existing Manhole	Dollars Cents	

Item	Quantity	Description with Unit Price Written	Unit Price	Total Price
30	1 EA	Connect to Existing Drop Inlet	Dollars Cents	
31	25 EA	Reconnect Customer Service Lateral	Dollars Cents	
32	1 LS	Storm Sewer Outfall	Dollars Cents	
33	685 LF	WVDOH Type "A" Trench Repair w/ 2" Full-Width HMA Overlay	Dollars Cents	
34	240 LF	WVDOH Type "B" Trench Repair	Dollars Cents	
35	85 LF	WVDOH Type "C" Trench Repair	Dollars Cents	
36	40 LF	Driveway Repair (Gravel)	Dollars Cents	
37	210 LF	Concrete Sidewalk Repair	Dollars Cents	
38	985 LF	2" HMA Overlay	Dollars Cents	

Item	Quantity	Description with Unit Price Written	Unit Price	Total Price
39	1,350 LF	WVDOH Inspection Fee Allowance Three Thirty-Seven	Dollars Cents	
			\$3.37	\$4,549.50
40	65 LF	Privacy Fence	Dollars Cents	
41	15 EA	8 x 4" PVC Wye Connection	Dollars Cents	
42	15 EA	8 x 4" D.I. Wye Connection	Dollars Cents	
43	7 EA	6 x 4" PVC Wye Connection	Dollars Cents	

**TOTAL BID:** \_\_\_\_\_ (\$ \_\_\_\_\_ )

(Amounts are to be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

**NOTE: THE CONTRACTOR'S UNIT PRICES SHALL INCLUDE PURCHASE AND INSTALLATION, COMPLETE IN PLACE, PER BID ITEM IN ACCORDANCE WITH THE DETAILED SPECIFICATIONS.**

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

**METHOD OF AWARD**

If at the time this contract is to be awarded, the lowest total bid submitted by a qualified, responsible Bidder does not exceed the amount of funds then estimated by the Owner, as available to finance the

contract, the construction contract will be awarded. If such bids exceed such amount, the Owner may reject all bids.

The owner may award the contract on the Total Bid submitted by a qualified responsible Bidder less the amount(s) of the Deductive Alternate(s) subtracted in numerical order, as listed in the contract to produce the lowest bid within the funds available for financing.

- A. Unit prices have been computed in accordance with paragraph 13.03.A of the General Conditions.
- B. Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

**ARTICLE 6 – TIME OF COMPLETION**

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

**ARTICLE 7 – ATTACHMENTS TO THIS BID**

- 7.01 The following documents are submitted with and made a condition of this Bid:
  - A. Bid Opening Requirements

**ARTICLE 8 – DEFINED TERMS**

- 8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

\_\_\_\_\_

By:

*[Signature]*

\_\_\_\_\_

*[Printed name]*

\_\_\_\_\_

*(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)*

Attest:

*[Signature]*

\_\_\_\_\_

*[Printed name]*

\_\_\_\_\_

Title:

\_\_\_\_\_

Submittal Date:

\_\_\_\_\_

Address for giving notices:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone Number:

\_\_\_\_\_

Fax Number:

\_\_\_\_\_

Contact Name and e-mail address:

\_\_\_\_\_  
\_\_\_\_\_

Bidder's License No.:

*(where applicable)*

\_\_\_\_\_

## SECTION 012000 - PRICE AND PAYMENT PROCEDURES

### 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 SECTION INCLUDES

- A. Application for Payment.
- B. Change procedures.
- C. Defect assessment.
- D. Measurement and Payment.

#### 1.3 APPLICATION FOR PAYMENT

- A. Submit five (5) 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 and payment schedule with each Application for Payment.
- D. Payment Period: Submit at intervals stipulated in the Agreement.
- E. Submit submittals with transmittal letter as specified in Section 013300 - Submittal Procedures.
- F. Substantiating Data: When Engineer requires substantiating information, submit data justifying dollar amounts in question. Include the following with Application for Payment:
  - 1. Current construction photographs
  - 2. Partial release of Liens from major Subcontractors and vendors.
  - 3. Record Documents as specified in Section 017000 - Execution and Closeout Requirements, for review by Owner, which will be returned to Contractor.
  - 4. Affidavits attesting to off-Site stored products.
  - 5. Construction Progress Schedule revised and current as specified in Section 013300 - Submittal Procedures.

#### 1.4 CHANGE PROCEDURES

- A. Submittals: Submit name of individual who is authorized to receive change documents and is responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.
- B. Carefully study and compare Contract Documents before proceeding with fabrication and installation of Work. Promptly advise Engineer of any error, inconsistency, omission, or apparent discrepancy.
- C. Requests for Interpretation (RFI) and Clarifications: Allot time in construction scheduling for liaison with Engineer; establish procedures for handling queries and clarifications.
  - 1. Use Request for Information Form for requesting interpretations (provided by Engineer upon request).
  - 2. Engineer may respond with a direct answer on the Request for Information form, separate Engineer Response, EJCDC C-942 - Field Order, or EJCDC C-940 - Work Change Directive Form.
- D. Engineer will advise of minor changes in the Work not involving adjustment to Contract Sum/Price or Contract Time by issuing supplemental instructions on EJCDC C-942.
- E. Engineer may issue Notice of Change including a detailed description of proposed change with supplementary or revised Drawings and Specifications, a change in Contract Time for executing the change with stipulation of overtime Work required and with the period of time during which the requested price will be considered valid. Contractor will prepare and submit estimate within ten (10) days.
- F. Contractor may propose changes by submitting a request for change to Engineer, describing proposed change and its full effect on the Work. Include a statement describing reason for the change and the effect on Contract Sum/Price and Contract Time with full documentation and a statement describing effect on the Work by separate or other Contractors.
- G. Stipulated Sum/Price Change Order: Based on Proposal Request or Work Change Directive and Contractor's maximum price quotation or Contractor's request for Change Order as approved by Engineer.
- H. 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 Work Directive Change. Changes in Contract Sum/Price or Contract Time will be computed as specified for Time and Material Change Order.
- I. Work Change Directive: Engineer may issue directive, on EJCDC C-940 - Work Change Directive, 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.



- J. 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.
- K. 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.
- L. Document each quotation for change in Project Cost or Time with sufficient data to allow evaluation of quotation.
- M. Change Order Forms: EJCDC C-941 - Change Order.
- N. Execution of Change Orders: Engineer will issue Change Orders for signatures of parties as provided in Conditions of the Contract.
- O. 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 sub-schedules to adjust times for other items of Work affected by the change, and resubmit.
  - 3. Promptly enter changes in Record Documents.

#### 1.5 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of Engineer or Owner, it is not practical to remove and replace the Work, Engineer or Owner 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 Owner.
- 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 Owner.
- E. Individual Specification Sections may modify these options or may identify specific formula or percentage sum/price reduction.
- F. Authority of Owner 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.

## 1.6 MEASUREMENT AND PAYMENT

### A. General Requirements

1. Contractor shall take measurements and compute quantities. Resident Project Representative and Engineer will verify measurements and quantities.
2. Unit Quantities: Quantities and measurements indicated on Bid Form are for Contract purposes only. Actual quantities provided shall determine payment.
  - a. When actual Work requires more or fewer quantities than those quantities indicated, provide required quantities at Contracted unit sum/prices.
  - b. When actual Work requires 25 percent or greater change in quantity than those quantities indicated, Owner or Contractor may claim a Contract Price adjustment.
3. 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.
4. 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.

### B. 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.

### C. Unit Price Schedule:

1. Bid Item 1 – Mobilization/Demobilization
  - a. This Item shall include the performance of construction preparatory operations, including the movement of equipment and personnel to and from the Project Site,

- establishment and decommissioning of Contractor's Field Office, storage buildings, and other facilities necessary to conduct Work under this Contract.
- b. This Bid Item shall also include all costs associated with installing, maintaining, and removing the Project Sign.
  - c. This Bid Item shall also include any and all costs associated with the following Specification Sections:
    - 1) Section 012600 – Contract Modification Procedures
    - 2) Section 013000 – Administrative Requirements
    - 3) Section 013216 – Construction Progress Schedule
  - d. Payment shall be made at the lump sum (LS) price Bid for Mobilization/Demobilization, but in no case shall the total lump sum Bid Price exceed 5 percent of the total Bid.
  - e. Partial Payments of the lump sum Bid amount for mobilization/demobilization shall be as follows:
    - 1) One-fourth of the amount Bid for Mobilization/Demobilization will be released to the Contractor as the first estimate payable, not less than fifteen (15) days after the start of Work at the Project Site.
    - 2) The second one-fourth of the amount Bid for Mobilization/Demobilization shall be released with the estimate payable thirty (30) days after the first estimate.
    - 3) The third one-fourth of the amount Bid for Mobilization/Demobilization shall be released with the estimate payable thirty (30) days later than the estimate in which the second one-fourth has been paid.
    - 4) The final one-fourth of the amount Bid for Mobilization/Demobilization shall be released with the final payment.
    - 5) No reduction will be made, nor any increase be made, in the lump sum mobilization item amount regardless of decreased or increases in the final total Contract amount or for any other cause.
2. Bid Item 2 – Erosion and Sedimentation Controls
- a. The cost of this work shall be 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.
3. Bid Item 3 – Videotaping of Project Area
- a. The cost for 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.

- c. The measurement for this bid item shall be based on a complete video recording on a DVD of the entire project area.
4. Bid Item 4 – 24” HDPE Storm Sewer Line
- a. This Bid Item shall include all required labor, materials, equipment and all other costs associated with the complete construction of the 24” HDPE Storm Pipe including, but not limited to, excavation, bedding, backfill, fittings, pipe joints, pipe, tools, supplies, and all other incidentals. All fittings used shall be included in the linear foot price of the pipe.
  - b. The 24” HDPE Storm Line installed under this Bid Item shall be measured and paid for at unit price Bid per linear foot, as shown on the Drawings, or as directed by the Engineer, and installed complete in place. The measurement under this Bid Item shall be the length of pipe and fittings installed in place and accepted by the Engineer measured in the horizontal plane along the centerline of each pipe from the face of structure to the face of structure.
  - c. This Bid Item shall also include all costs associated with temporary bypass pumping, as required, to ensure existing service remains during construction. Any and all spills, fines, and/or backups shall be the sole responsibility of the Contractor.
  - d. This Bid Item shall also include restoration including, but not limited to, the purchase, delivery, and placement of lime, fertilizer, seed, and mulch and its application to all disturbed areas.
5. Bid Item 5 – 15” HDPE Storm Sewer Line
- a. The Bid Item shall include all required labor, materials, equipment and all other costs associated with the complete construction of the 15” HDPE Storm Pipe including, but not limited to, excavation, bedding, backfill, fittings, pipe joints, pipe, tools, supplies, and all other incidentals. All fittings used shall be included in the linear foot price of the pipe. All temporary fittings (i.e. plugs) required for sequencing the work shall be included in the linear foot price of the pipe.
  - b. The 15” HDPE Storm Pipe installed under this Bid Item shall be measured and paid for at unit price Bid per linear foot, as shown on the Drawings, or as directed by the Engineer, and installed complete in place. The measurement under this Bid Item shall be the length of pipe and fittings installed in place and accepted by the Engineer measured in the horizontal plane along the centerline of each pipe from the face of structure to the face of structure.
  - c. This Bid Item shall also include all costs associated with temporary bypass pumping, as required, to ensure existing service remains during construction. Any and all spills, fines, and/or backups shall be the sole responsibility of the Contractor.
  - d. This Bid Item shall also include restoration including, but not limited to, the purchase, delivery, and placement of lime, fertilizer, seed, and mulch and its application to all disturbed areas.
6. Bid Item 6 – 14” HDPE Storm Sewer Line
- a. The Bid Item shall include all required labor, materials, equipment and all other costs associated with the complete construction of the 14” HDPE Storm Pipe

including, but not limited to, excavation, bedding, backfill, fittings, pipe joints, pipe, tools, supplies, and all other incidentals. All fittings used shall be included in the linear foot price of the pipe. All temporary fittings (i.e. plugs) required for sequencing the work shall be included in the linear foot price of the pipe.

- b. The 14" HDPE Storm Pipe installed under this Bid Item shall be measured and paid for at unit price Bid per linear foot, as shown on the Drawings, or as directed by the Engineer, and installed complete in place. The measurement under this Bid Item shall be the length of pipe and fittings installed in place and accepted by the Engineer measured in the horizontal plane along the centerline of each pipe from the face of structure to the face of structure.
- c. This Bid Item shall also include all costs associated with temporary bypass pumping, as required, to ensure existing service remains during construction. Any and all spills, fines, and/or backups shall be the sole responsibility of the Contractor.
- d. This Bid Item shall also include restoration including, but not limited to, the purchase, delivery, and placement of lime, fertilizer, seed, and mulch and its application to all disturbed areas.

7. Bid Item 7 – 12" HDPE Storm Sewer Line

- a. The Bid Item shall include all required labor, materials, equipment and all other costs associated with the complete construction of the 12" HDPE Storm Pipe including, but not limited to, excavation, bedding, backfill, fittings, pipe joints, pipe, tools, supplies, and all other incidentals. All fittings used shall be included in the linear foot price of the pipe. All temporary fittings (i.e. plugs) required for sequencing the work shall be included in the linear foot price of the pipe.
- b. The 12" HDPE Storm Pipe installed under this Bid Item shall be measured and paid for at unit price Bid per linear foot, as shown on the Drawings, or as directed by the Engineer, and installed complete in place. The measurement under this Bid Item shall be the length of pipe and fittings installed in place and accepted by the Engineer measured in the horizontal plane along the centerline of each pipe from the face of structure to the face of structure.
- c. This Bid Item shall also include all costs associated with temporary bypass pumping, as required, to ensure existing service remains during construction. Any and all spills, fines, and/or backups shall be the sole responsibility of the Contractor.
- d. This Bid Item shall also include restoration including, but not limited to, the purchase, delivery, and placement of lime, fertilizer, seed, and mulch and its application to all disturbed areas.

8. Bid Item 8 – 10" HDPE Storm Sewer Line

- a. The Bid Item shall include all required labor, materials, equipment and all other costs associated with the complete construction of the 10" HDPE Storm Pipe including, but not limited to, excavation, bedding, backfill, fittings, pipe joints, pipe, tools, supplies, and all other incidentals. All fittings used shall be included in the linear foot price of the pipe. All temporary fittings (i.e. plugs) required for sequencing the work shall be included in the linear foot price of the pipe.
- b. The 10" HDPE Storm Pipe installed under this Bid Item shall be measured and paid for at unit price Bid per linear foot, as shown on the Drawings, or as directed

by the Engineer, and installed complete in place. The measurement under this Bid Item shall be the length of pipe and fittings installed in place and accepted by the Engineer measured in the horizontal plane along the centerline of each pipe from the face of structure to the face of structure.

- c. This Bid Item shall also include all costs associated with temporary bypass pumping, as required, to ensure existing service remains during construction. Any and all spills, fines, and/or backups shall be the sole responsibility of the Contractor.
- d. This Bid Item shall also include restoration including, but not limited to, the purchase, delivery, and placement of lime, fertilizer, seed, and mulch and its application to all disturbed areas.

9. Bid Item 9 – 8” PVC SDR 35 Gravity Sewer Line

- a. This Bid Item shall include all required labor, materials, equipment and all other costs associated with the complete construction of 8” PVC SDR 35 Gravity Sewer Line including, but not limited to, excavation, bedding, backfill, fittings, joints, pipe, wye connections as detailed on the Drawings, tools, supplies, testing, and incidentals. All fittings used shall be included in the linear foot price of the pipe.
- b. The sewers installed under this item shall be measured and paid for unit price Bid per linear foot of pipe of each type and size as specified on Drawings or as directed by the Engineer and installed complete in place. The measurement under this item shall be the length of pipe and fittings as installed in place and accepted and shall be measured in the horizontal plane along the centerline of each pipe installed, measured from the face of manhole to face of manhole.
- c. This Bid Item shall also include restoration including, but not limited to, the purchase, delivery, and placement of lime, fertilizer, seed, and mulch and its application to all disturbed areas.

10. Bid Item 10 – 6” PVC SDR 35 Gravity Sewer Line

- a. This Bid Item shall include all required labor, materials, equipment, and other costs associated with the complete construction of 6” PVC SDR 35 Gravity Sewer Line including, but not limited to, excavation, bedding, backfill, fittings, joints, pipe, wye connections as detailed on the Drawings, tools, supplies, testing, and incidentals. All fittings used shall be included in the linear foot price of the pipe.
- b. The sewers installed under this item shall be measured and paid for unit price Bid per linear foot of pipe of each type and size as specified on Drawings or as directed by the Engineer and installed complete in place. The measurement under this item shall be the length of pipe and fittings as installed in place and accepted and shall be measured in the horizontal plane along the centerline of each pipe installed, measured from the face of manhole to face of manhole.
- c. This Bid Item shall also include restoration including, but not limited to, the purchase, delivery, and placement of lime, fertilizer, seed, and mulch and its application to all disturbed areas.

11. Bid Item 11 – 8” D.I. Gravity Sewer Line

- a. This Bid Item shall include all required labor, materials, equipment and all other costs associated with the complete construction of 8” D.I. Gravity Sewer Line

including, but not limited to, excavation, bedding, backfill, fittings, joints, pipe, wye connections as detailed on the Drawings, tools, supplies, testing, and incidentals. All fittings used shall be included in the linear foot price of the pipe.

- b. The sewers installed under this item shall be measured and paid for unit price Bid per linear foot of pipe of each type and size as specified on Drawings or as directed by the Engineer and installed complete in place. The measurement under this item shall be the length of pipe and fittings as installed in place and accepted and shall be measured in the horizontal plan along the centerline of each pipe installed, measured from the face of manhole to face of manhole.
- c. This Bid Item shall also include restoration including, but not limited to, the purchase, delivery, and placement of lime, fertilizer, seed, and mulch and its application to all disturbed areas.

12. Bid Item 12 – 4” PVC Service Lateral Piping

- a. This Bid Item shall include all required labor, materials, equipment and all other costs associated with the complete removal of existing sewer lines regardless of size and material and the subsequent replacement with 4-inch PVC customer service lateral including, but not limited to, excavation, bedding, backfill, seeding, mulching, restoration of disturbed area, materials, fittings, pipe, tools, supplies, testing, and incidentals. All fittings used shall be included in the linear foot price of the pipe.
- b. This Bid Item shall also include all costs associated with temporary bypass pumping, as required, to ensure existing sanitary sewer service remains during construction. Any and all spills, fines, and/or backups shall be the sole responsibility of the Contractor.
- c. The customer service laterals installed under this item shall be measured and paid for at the unit price Bid per linear feet of pipe as specified on Drawings or as directed by the Engineer and installed complete in place. The measurement under this item shall be the length of pipe and fittings installed in place and accepted and shall be measured in the horizontal plane along the centerline of each pipe installed, measured from the customer service wye connection to the customer service lateral cleanout.

13. Bid Item 13 – 4” D.I. Service Lateral Piping

- a. This Bid Item shall include all required labor, materials, equipment and all other costs associated with the complete removal of existing sewer lines regardless of size and material and the subsequent replacement with 4-inch DIP customer service lateral including, but not limited to, excavation, bedding, backfill, seeding, mulching, restoration of disturbed area, materials, fittings, pipe, tools, supplies, testing, and incidentals. All fittings used shall be included in the linear foot price of the pipe.
- b. This Bid Item shall also include all costs associated with temporary bypass pumping, as required, to ensure existing sanitary sewer service remains during construction. Any and all spills, fines, and/or backups shall be the sole responsibility of the Contractor.
- c. The customer service laterals installed under this item shall be measured and paid for at the unit price Bid per linear feet of pipe as specified on Drawings or as directed by the Engineer and installed complete in place. The measurement under

this item shall be the length of pipe and fittings installed in place and accepted and shall be measured in the horizontal plane along the centerline of each pipe installed, measured from the customer service wye connection to the customer service lateral cleanout

14. Bid Item 14 – 36” Steel Casing (Bore & Jack)

- a. This Bid Item shall include all required labor, material, equipment, and other costs associated with the construction of the crossing, complete in place, including, but not limited to, excavation, sheeting, bracing, backfilling, grouting, casing seal, blocking, etc.
- b. Measurement and payment under this item shall be measured and paid for at the unit price Bid per linear foot of the overall length of the casing pipe satisfactorily installed.
- c. Payment shall be for casing pipe only; carrier pipe shall be paid by the unit Bid price per foot.
- d. Compensation for unauthorized casing footage beyond that which is called for in the Drawings and Specifications will not be made.

15. Bid Item 15 – 16” Steel Casing (Bore & Jack)

- a. This Bid Item shall include all required labor, material, equipment, and other costs associated with the construction of the crossing, complete in place, including, but not limited to, excavation, sheeting, bracing, backfilling, grouting, casing seal, blocking, etc.
- b. Measurement and payment under this item shall be measured and paid for at the unit price Bid per linear foot of the overall length of the casing pipe satisfactorily installed.
- c. Payment shall be for casing pipe only; carrier pipe shall be paid by the unit Bid price per foot.  
Compensation for unauthorized casing footage beyond that which is called for in the Drawings and Specifications will not be made.

16. Bid Item 16 – 30” Steel Casing (Bore & Jack)

- a. This Bid Item shall include all required labor, material, equipment, and other costs associated with the construction of the crossing, complete in place, including, but not limited to, excavation, sheeting, bracing, backfilling, grouting, casing seal, blocking, etc.
- b. Measurement and payment under this item shall be measured and paid for at the unit price Bid per linear foot of the overall length of the casing pipe satisfactorily installed.
- c. Payment shall be for casing pipe only; carrier pipe shall be paid by the unit Bid price per foot.  
Compensation for unauthorized casing footage beyond that which is called for in the Drawings and Specifications will not be made.

17. Bid Item 17 – 24” Steel Casing (Bore & Jack)



- a. This Bid Item shall include all required labor, material, equipment, and other costs associated with the construction of the crossing, complete in place, including, but not limited to, excavation, sheeting, bracing, backfilling, grouting, casing seal, blocking, etc.
- b. Measurement and payment under this item shall be measured and paid for at the unit price Bid per linear foot of the overall length of the casing pipe satisfactorily installed.
- c. Payment shall be for casing pipe only; carrier pipe shall be paid by the unit Bid price per foot.  
Compensation for unauthorized casing footage beyond that which is called for in the Drawings and Specifications will not be made.

18. Bid Item 18 – 20” Steel Casing (Bore & Jack)

- a. This Bid Item shall include all required labor, material, equipment, and other costs associated with the construction of the crossing, complete in place, including, but not limited to, excavation, sheeting, bracing, backfilling, grouting, casing seal, blocking, etc.
- b. Measurement and payment under this item shall be measured and paid for at the unit price Bid per linear foot of the overall length of the casing pipe satisfactorily installed.
- c. Payment shall be for casing pipe only; carrier pipe shall be paid by the unit Bid price per foot.  
Compensation for unauthorized casing footage beyond that which is called for in the Drawings and Specifications will not be made.

19. Bid Item 19 – 48” Diameter Sanitary Manhole Base, Cone Top, Watertight Casting & Lid

- a. This Bid Item shall include all required labor, materials, equipment and all other costs associated with the complete construction of 48” Diameter Manhole Base, Cone Top, Watertight Casting, & Lid including, but not limited to, excavation, bedding, backfill, installation of pre-cast concrete manhole, cone top, watertight casting, lid, and other appurtenances as indicated on the Drawing.
- b. Payment for manholes shall be as follows:
  - 1) Gravel sub-base, manhole base, steps, cone top, frame and cover (water tight where indicated), up to 6-foot depth measured from invert out elevation to top of cover elevation, shall be paid at the Contract unit Bid price per each.
  - 2) Manhole riser piping of specified inside diameter required additional depth over 6 feet shall be paid for at the unit Bid price per vertical foot for Precast Manhole Riser Pipe.
  - 3) Payment for internal drop connectors, as required, for manhole construction shall be included in the unit Bid price for each new manhole installed.

20. Bid Item 20 – Remove & Replace 48” Diameter Sanitary Manhole Base, Cone Top, Watertight Casting & Lid

- a. This Bid Item shall include all required labor, materials, equipment, and all other costs associated with the complete removal and replacement of sewer manholes

including, but not limited to, excavation, bedding installation of pre-cast concrete manhole, backfill, seeding, mulching, restoration of disturbed area, and other appurtenances.

- b. This Bid Item shall also include all costs associated with temporary bypass pumping, as required, to ensure existing sanitary sewer service remains during construction. Any and all spills, fines, and/or backups shall be the sole responsibility of the Contractor.
- c. Payment for manholes shall be as follows:
  - 1) Gravel sub-base, manhole base, steps, cone top, frame and cover (water tight where indicated), up to 6-foot depth measured from invert out elevation to top of cover elevation, shall be paid at the Contract unit Bid price per each.
  - 2) Manhole riser piping of specified inside diameter required for additional depth over 6 feet shall be paid for at the unit Bid price per vertical foot for Precast Manhole Riser Pipe.
  - 3) Payment for internal drop connectors, as required, for manhole construction shall be included in the unit Bid price for each new manhole installed.

21. Bid Item 21 – 48” Diameter Storm Manhole Base, Cone Top & Lid

- a. This Bid Item shall include all required labor, materials, equipment and all other costs associated with the complete new storm manholes including, but not limited to, excavation, bedding, installation of pre-cast concrete manhole, backfill, seeding, mulching, restoration of disturbed area, and other appurtenances.
- b. This Bid Item shall also include all costs associated with temporary bypass pumping, as required, to ensure existing storm sewer service remains during construction. Any and all spills, fines, and/or backups shall be the sole responsibility of the Contractor.
- c. Payment for manholes shall be as follows:
  - 1) Gravel sub-base, manhole base, steps, cone top, frame, and cover (water tight where indicated), up to 6-foot depth measured from invert out elevation to top of cover elevation, shall be paid at the Contract unit Bid price per each.
  - 2) Manhole riser piping of specified inside diameter required for additional depth over 6 feet shall be paid for at the unit Bid price per vertical foot for Precast Manhole Riser Pipe.
  - 3) Payment for internal drop connectors, as required, for manhole construction shall be included in the unit Bid price for each new manhole installed.

22. Bid Item 22 – Remove Existing Drop Inlet & Replace 48” Diameter Storm Manhole Base, Cone Top & Lid

- a. This Bid Item shall include all required labor, materials, equipment, and all other costs associated with the complete removal and replacement of storm manholes including, but not limited to, excavation, bedding, installation of pre-cast concrete manhole, backfill, seeding, mulching, restoration of disturbed area, and other appurtenances.
- b. This Bid Item shall also include all costs associated with temporary bypass pumping, as required, to ensure existing storm sewer service remains during

construction. Any and all spills, fines, and/or backups shall be the sole responsibility of the Contractor.

c. Payment for manholes shall be as follows:

- 1) Gravel sub-base, manhole base, steps, cone top, frame, and cover (water tighter where indicated), up to 6-foot depth measured from invert out elevation to top of cover elevation, shall be paid at the Contract unit Bid price per each.
- 2) Manhole riser piping of specified inside diameter required for additional depth over 6 feet shall be paid for at the unit Bid price per vertical foot for Precast Manhole Riser Pipe.

Payment for internal drop connectors, as required, for manhole construction shall be included in the unit Bid price for each new manhole installed

23. Bid Item 23 – RegROUT Existing Manhole

- a. This Bid item shall include all required labor, materials, equipment, power, cleaning, grease/root removal, removal and disposal of all debris, step removal, grouting, coating of exposed step reinforcing bars, coating of exposed reinforcing wire, patching, wall profile restoration, bench reconstruction, patching and reconstruction of channel invert, and all other costs associated with the fabrication, delivery, installation, and testing of a complete Manhole Lining system.
- b. This Bid Item shall also include all costs associated with temporary bypass pumping, as required, to ensure existing sanitary sewer service remains during construction. Any and all spills, fines, and/or backups shall be the sole responsibility of the Contractor.
- c. Payment will be made at the unit price Bid per vertical foot of manhole rehabilitated as measured from the invert at the center of the manhole to the bottom base of the manhole cover frame, completed, tested, and placed in service.

24. Bid Item 24 – New Drop Inlet

- a. This Bid Item shall include all required labor, materials, equipment, and other costs associated with the complete construction of New Drop Inlet including, but not limited to, excavation, bedding, backfill, materials, fittings, tools, supplies, seeding and mulching, tie-ins, and all other incidentals.
- b. The New Drop Inlet installed under this Bid Item shall be measured and paid for at per each Bid Price.

25. Bid Item 25 – Remove & Replace Drop Inlet

- a. This Bid Item shall include all required labor, materials, equipment, and other costs associated with Removing and Replacing Drop Inlet including, but not limited to, excavation, bedding, backfill, materials, fittings, tools, supplies, seeding and mulching, tie-ins, and all other incidentals.
- b. The Removal & Replace New Drop Inlet installed under this Bid Item shall be measured and paid for at per each Bid Price.

26. Bid Item 26 – 48” Diameter Concrete Manhole Riser Pipe

- a. Riser section required for depths over 6 feet will be measured and paid for by the unit Bid price per vertical foot.
  - b. Manhole base, cone top, frame and cover, complete in place to a depth of 6 feet, shall be paid for by the unit Bid price per each for Manholes.
27. Bid Item 27 – 8” Gravity Terminal Line Cleanout
- a. This Bid Item shall include all required labor, materials, equipment, and other costs associated with the complete construction of a new cleanout assembly, as detailed on the Drawings.
  - b. Payment for this Bid Item shall be made on a per each basis for all new cleanout assemblies.
28. Bid Item 28 – 6” Gravity Terminal Line Cleanout
- a. This Bid Item shall include all required labor, materials, equipment, and other costs associated with the complete construction of a new cleanout assembly, as detailed on the Drawings.
  - b. Payment for this Bid Item shall be made on a per each basis for all new cleanout assemblies.
29. Bid Item 29 – Connect to Existing Manhole
- a. This Bid Item shall include all costs associated with connecting any necessary piping to existing manhole. This Bid Item shall include, but not be limited to, costs such as labor and materials required, fittings and incidental pipe to make the proper connections.
30. Bid Item 30 – Connect to Existing Drop Inlet
- a. This Bid Item shall include all costs associated with connecting any necessary piping to existing drop inlet. This Bid Item shall include, but not be limited to, costs such as labor and materials required, fittings and incidental pipe to make the proper connections.
31. Bid Item 31 – Reconnect Customer Service Lateral
- a. This Bid Item shall include all required labor, material, equipment, and other costs associated with the complete reconnection of the customer service lateral.
  - b. This Bid Item shall also include all costs associated with locating the existing customer service lateral.
  - c. This Bid Item shall also include all costs associated with temporary bypass pumping, as required, to ensure existing sanitary sewer service remains during construction. Any and all spills, fines, and/or backups shall be the sole responsibility of the Contractor.  
This Bid Item shall also include all required labor, material, equipment and other costs associated with constructing and installing a customer service lateral cleanout, as detailed in the Drawings, at the location of the customer service lateral reconnection.

32. Bid Item 32 – Storm Sewer Outfall
- a. The cost of this work shall be based on a Lump Sum Price. Such payment shall constitute full compensation for excavation, bedding, backfill, materials, fittings, tools, supplies, seeding and mulching, tie-ins, concrete and grouting, filter fabric, rip rap ditch, and other cost associated to a Storm Sewer Outfall as specified on Plans or as directed by the Engineer, and installed complete in place.
33. Bid Item 33 – WVDOH Type “A” Trench Repair w/ Full-Width 2” HMA Overlay
- a. This Bid Item shall include all required labor, materials, equipment, milling of the existing road, and all other costs associated with the trench repair as shown on the Drawings or as directed by the Engineer and installed complete in place. All costs associated with traffic control shall be included in the unit price. Trench repairs shall be paid for by the linear foot, without regard to width, times the Bid price. No payment shall be made for trench repair outside the limits shown on the Contract Documents.
  - b. Payment shall be based on horizontal linear footage of trench repair as determined by the Contractor and confirmed by the Engineer. The Engineer has final authority for measured quantity.
34. Bid Item 34 – WVDOH Type “B” Trench Repair
- a. This Bid Item shall include all required labor, materials, equipment and all other costs associated with the trench repair as shown on the Drawings or as directed by the Engineer and installed complete in place. All costs associated with traffic control shall be included in the unit price. Trench repairs shall be paid for by the linear foot, without regard to width, times the Bid price. No payment shall be made for trench repair outside the limits shown on the Contract Documents.
  - b. Payment shall be based on horizontal linear footage of trench repair as determined by the Contractor and confirmed by the Engineer. The Engineer has final authority for measured quantity.
35. Bid Item 35 – WVDOH Type “C” Trench Repair
- a. This Bid Item shall include all required labor, materials, equipment and all other costs associated with the trench repair as shown on the Drawings or as directed by the Engineer and installed complete in place. All costs associated with traffic control shall be included in the unit price. Trench repairs shall be paid for by the linear foot, without regard to width, times the Bid price. No payment shall be made for trench repair outside the limits shown on the Contract Documents.
  - b. Payment shall be based on horizontal linear footage of trench repair as determined by the Contractor and confirmed by the Engineer. The Engineer has final authority for measured quantity.
36. Bid Item 36 – Driveway Repair (Gravel)
- a. This Bid Item shall include all required labor, materials, equipment and all other costs associated with the gravel driveway repair. All costs required for traffic control shall be included in the unit price. Gravel driveway repairs shall be paid for

by the linear foot, without regard to width, times the Bid price. No payment shall be made for driveway repair outside the limits shown on the Contract Documents. No payment will be made for temporary paving required during construction.

37. Bid Item 37 – Concrete Sidewalk Repair

- a. This Bid Item shall include all required labor, materials, equipment and all other costs associated with the concrete sidewalk repairs repair. All costs required for traffic control shall be included in the unit price. Concrete sidewalk repairs shall be paid for by the linear foot, without regard to width, times the Bid price. No payment shall be made for sidewalk repair outside the limits shown on the Contract Documents. No payment will be made for temporary paving required during construction.

38. Bid Item 38 – 2” HMA Overlay

- a. This Bid Item shall include all required labor, materials, equipment, and other costs associated with the complete overlay of asphalt roads with 2” HMA, as detailed on the Drawings.
- b. This Bid Item shall be paid for at the unit price Bid per linear foot, as shown on the Drawings, or as directed by the Engineer, completed and accepted by the Engineer. The measurement under this Bid Item shall be the length 2” HMA Overlay along the centerline of pipe.
- c. Width shall not be considered. The Contractor shall repair all pavement disturbed as determined by the Engineer or his representative. Pavement disturbed by the Contractor where pipeline was not installed shall be replaced at the Contractor’s expense.
- d. All areas of pavement disturbed due to any of the Contractor’s operations which are not along the centerline of the pipe shall also be satisfactorily repaired, at no additional cost to the Owner.
- e. Straight, perpendicular saw cuts between the existing asphalt or concrete surfaces shall be included in this work.
- f. Payment for footages that have less than the excavation width shall be prorated per linear foot.
- g. Payment for overlay shall include all required milling of existing pavement and pavement markings.

39. Bid Item 39 – WVDOH Inspection Fee Allowance

- a. This Allowance shall include all costs associated with the Contractor paying inspection fees, as required by the West Virginia Division of Highways. The Allowance amount is \$4,549.50.
- b. The costs associated with this fee shall be in accordance with General Conditions Article 13.
- c. This Bid Item specifically excludes any work shown on the contract documents. All work within the Contract Documents shall be included in previous bid items.

40. Bid Item 40 – Privacy Fence

- a. This Bid Item shall include all required labor, materials, equipment and all other costs associated with the complete construction of 6' Tall Privacy Fence including, but not limited to, excavation, lumber, coating, concrete, and backfill.
- b. This item shall be measured and paid for by unit price Bid per linear foot of fencing as installed in place and accepted and shall be measured in the horizontal plane along the centerline of the fence installed, measured from the fence post to fence post.

41. Bid Item 41 – 8" x 4" PVC Wye Connection

- a. This Bid item shall include all required labor, material, equipment, and other costs associated with the complete reconnection of the existing customer to the main sewer line.
- b. This Bid item shall also include all costs associated with furnishing and installing a new wye connection appropriately sized to fit the main sewer line and customer service lateral. The wye fitting shall be of the same material as the main sewer line.
- c. This Bid item shall also include all costs associated with locating the existing customer service lateral.
- d. This Bid item shall also include all costs associated with temporary bypass pumping, as required, to ensure existing sanitary sewer service remains operational during construction. Any and all spills, fines, and/or backups shall be the sole responsibility of the Contractor.
- e. This Bid item shall also include all required labor material equipment and other costs associated with constructing and installing a customer service lateral cleanout, as detailed in the Drawings, at the location of the customer service lateral reconnection.

42. Bid Item 41 – 8" x 4" D.I. Wye Connection

- a. This Bid item shall include all required labor, material, equipment, and other costs associated with the complete reconnection of the existing customer to the main sewer line.
- b. This Bid item shall also include all costs associated with furnishing and installing a new wye connection appropriately sized to fit the main sewer line and customer service lateral. The wye fitting shall be of the same material as the main sewer line.
- c. This Bid item shall also include all costs associated with locating the existing customer service lateral.
- d. This Bid item shall also include all costs associated with temporary bypass pumping, as required, to ensure existing sanitary sewer service remains operational during construction. Any and all spills, fines, and/or backups shall be the sole responsibility of the Contractor.
- e. This Bid item shall also include all required labor material equipment and other costs associated with constructing and installing a customer service lateral cleanout, as detailed in the Drawings, at the location of the customer service lateral reconnection.

43. Bid Item 41 – 6” x 4” PVC Wye Connection

- a. This Bid item shall include all required labor, material, equipment, and other costs associated with the complete reconnection of the existing customer to the main sewer line.
- b. This Bid item shall also include all costs associated with furnishing and installing a new wye connection appropriately sized to fit the main sewer line and customer service lateral. The wye fitting shall be of the same material as the main sewer line.
- c. This Bid item shall also include all costs associated with locating the existing customer service lateral.
- d. This Bid item shall also include all costs associated with temporary bypass pumping, as required, to ensure existing sanitary sewer service remains operational during construction. Any and all spills, fines, and/or backups shall be the sole responsibility of the Contractor.
- e. This Bid item shall also include all required labor material equipment and other costs associated with constructing and installing a customer service lateral cleanout, as detailed in the Drawings, at the location of the customer service lateral reconnection.

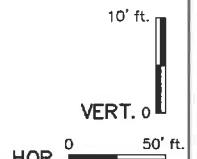
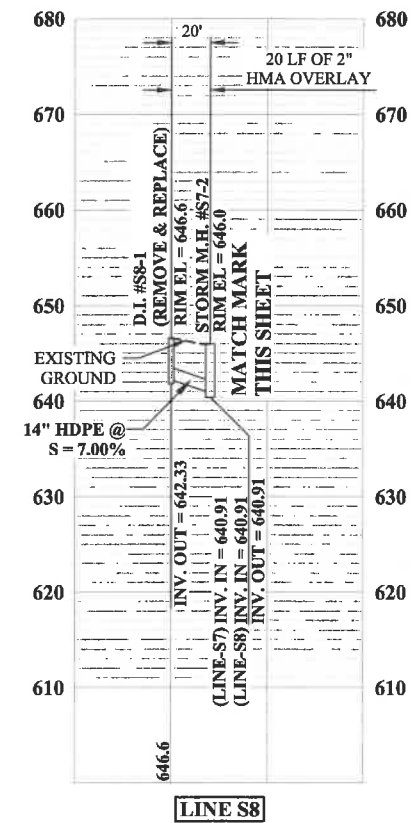
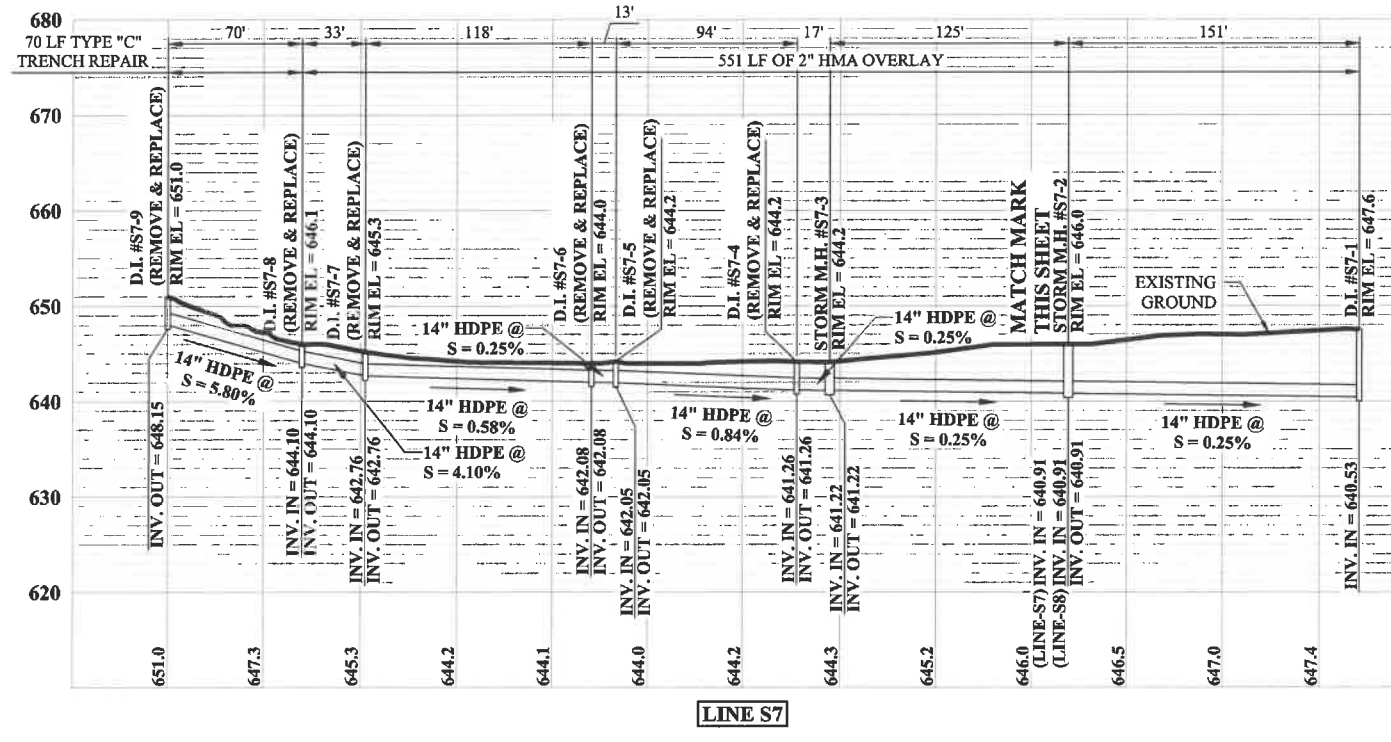
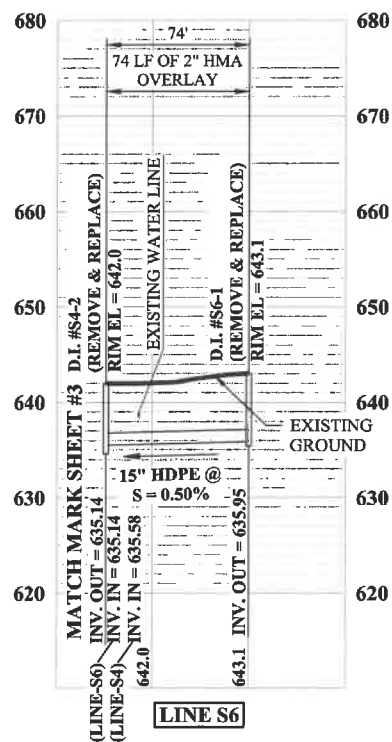
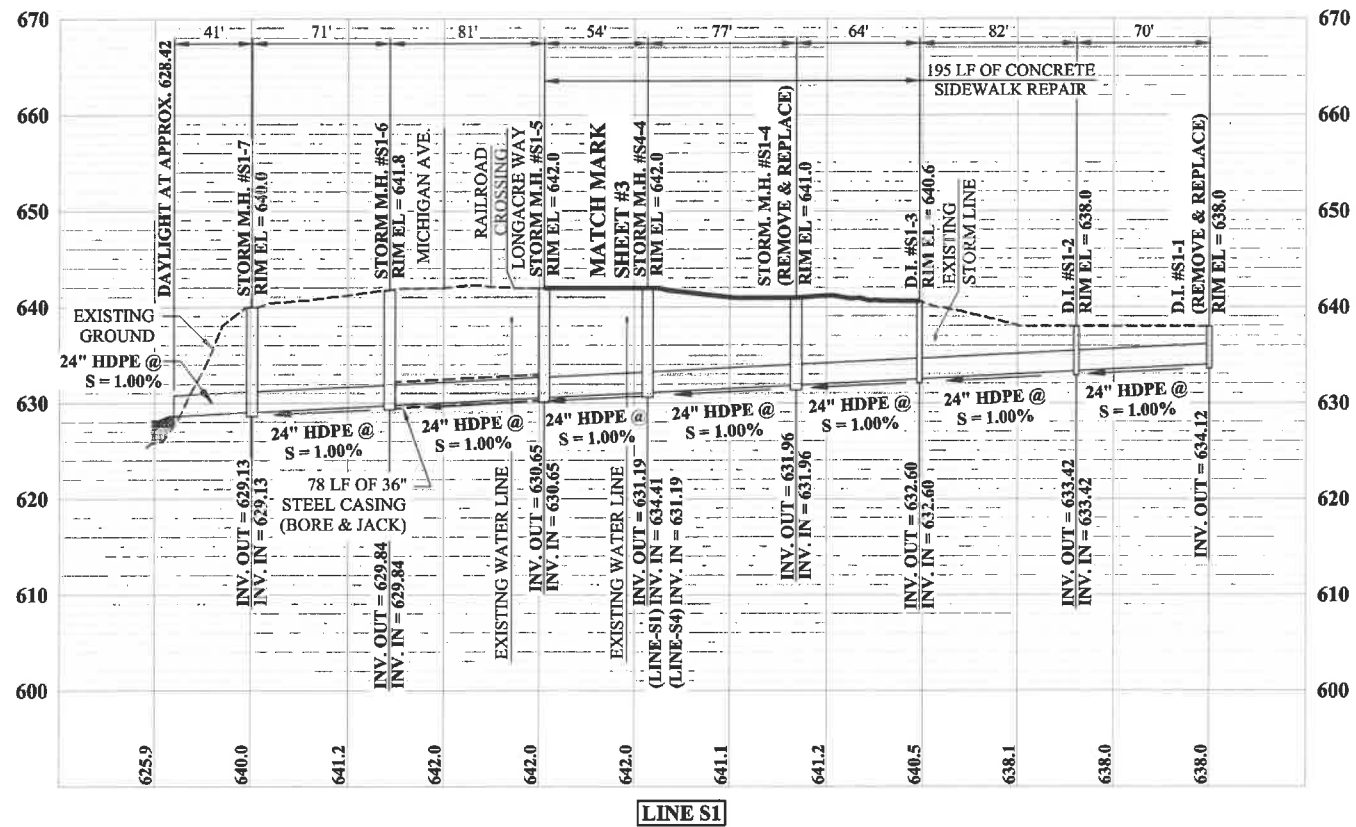
PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012000



SEE SHEET #3 FOR PLAN VIEW



ADDENDUM #3

SMITHERS SANITARY BOARD  
 PHASE II  
 SANITARY SEWER AND STORMWATER  
 SEPARATION PROJECT  
 STORMWATER- PROFILE

SHEET No.  
**3A**

NO.	BY	DATE	DESCRIPTION

SCALE: AS SHOWN  
 DRAWN: C. WILKINSON DATE: FEBRUARY 2020  
 CHECKED: R. BOUSTANY DATE: FEBRUARY 2020  
 APPROVED: J. CARPENTER DATE: FEBRUARY 2020  
 SURVEY DATE:  
 SURVEY BY:  
 FIELD BOOK No.:

**THRASHER**  
 300 ASSOCIATION DRIVE  
 CHARLESTON, WV 25311  
 www.thrashereng.com

PHONE (304)-343-7601 FAX (304)-343-7804

PHASE No.	
CONTRACT No.	
PROJECT No.	020-01410

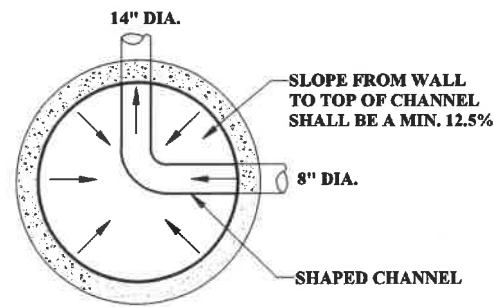
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 LAYOUT: SH 3A  
 USER: jason fisher

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USER: jason fisher  
 LAYOUT: SH 6  
 PLOT DATE/TIME: 10/27/2021 2:27 PM  
 CAD FILE: R:\020\020-1410 Smithers -Chan\Drawing\CI-SHEET 6.dwg



**PLAN VIEW  
MANHOLE #8**

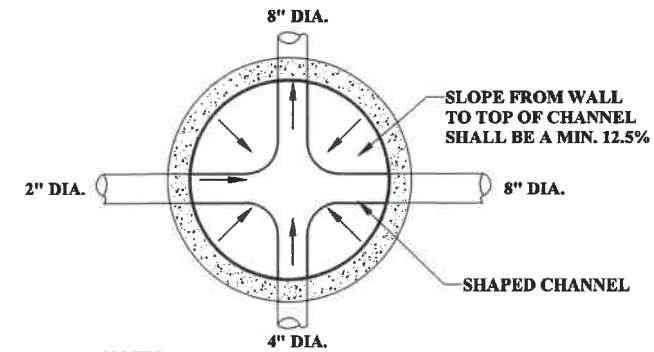


- NOTES:**
1. SLOPE FROM WALL TO TOP OF CHANNEL SHALL BE A MIN. 12.5%
  2. CHANNEL SLOPES SHALL BE A MIN. OF 0.10' FROM PIPE INVERT TO PIPE INVERT OUT.

**MANHOLE BASE VIEW  
MH #8  
NOT TO SCALE**



**PLAN VIEW  
MANHOLE #9**



- NOTES:**
1. SLOPE FROM WALL TO TOP OF CHANNEL SHALL BE A MIN. 12.5%
  2. CHANNEL SLOPES SHALL BE A MIN. OF 0.10' FROM PIPE INVERT TO PIPE INVERT OUT.

**MANHOLE BASE VIEW  
MH #9  
NOT TO SCALE**

**ADDENDUM #3**

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NO.	BY	DATE	DESCRIPTION

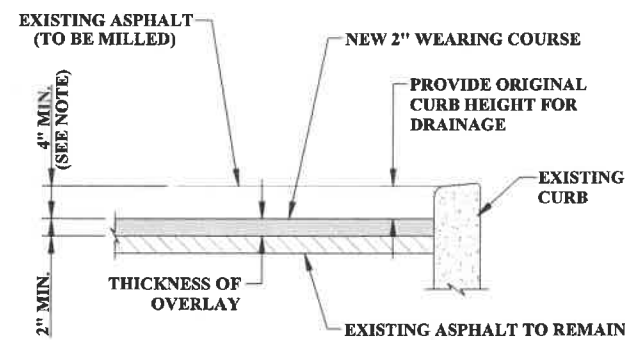
SCALE: AS SHOWN
DRAWN: C. WILKINSON DATE: FEBRUARY 2020
CHECKED: R. BOUSTANY DATE: FEBRUARY 2020
APPROVED: J. CARPENTER DATE: FEBRUARY 2020
SURVEY DATE:
SURVEY BY:
FIELD BOOK No.:

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

PHASE No.
CONTRACT No.
PROJECT No.
<b>020-01410</b>

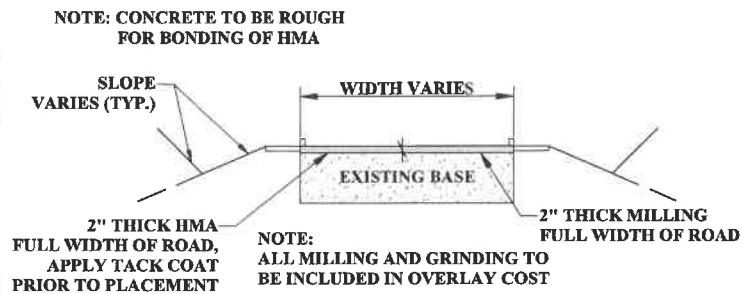
**SMITHERS SANITARY BOARD  
 PHASE II  
 SANITARY SEWER AND STORMWATER  
 SEPARATION PROJECT  
 MANHOLE IMPROVEMENTS**

SHEET No.
<b>6</b>



NOTE: CONTRACTOR SHALL MAINTAIN A MINIMUM DEPTH OF 4" BELOW TOP OF CURB W/ FINAL GRADE AS INDICATED. THE DEPTH MAY VARY ALONG STREET TO MAINTAIN PROPOSED SPOT ELEVATIONS INDICATED.

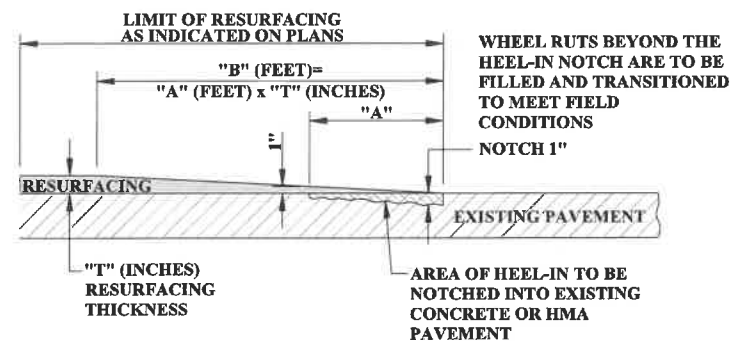
**MILLING / NEW ASPHALT DETAIL**  
NOT TO SCALE



**2" MILLING & 2" OVERLAY DETAIL**  
NOT TO SCALE

MIX PAVEMENT  
PRESENT AVERAGE DAILY TRAFFIC OVER 2000 OR LOWER-VOLUME ROADS WITH HEAVY TRUCK TRAFFIC (20 PER DAY)

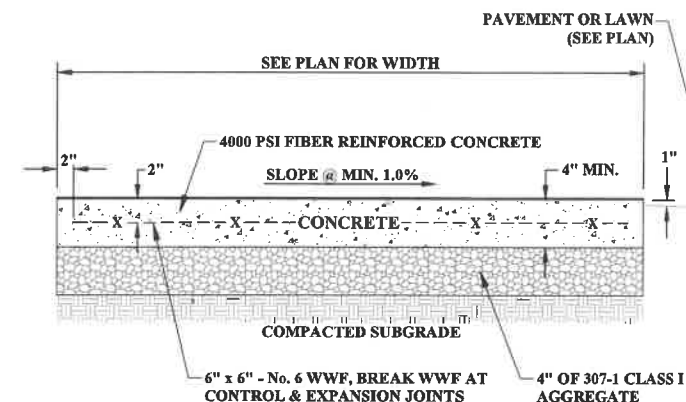
NOTES:  
1) WHERE TYPE "A" TRENCHES ARE WIDER THAN 7' IN EXISTING BITUMINOUS PAVEMENT, CONCRETE MAY BE DELETED IF EXISTING HMA THICKNESS AND 18" STONE ARE RESTORED.  
2) TRAFFIC IS TO BE MAINTAINED AT ALL TIMES BY THE USE OF APPROPRIATE TRAFFIC CONTROL DEVICES. USE OF METAL PLATES, HAVING SUFFICIENT 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 IT'S COMPRESSIVE STRENGTH.



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.

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

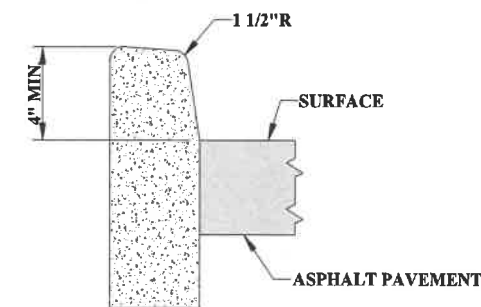
**RESURFACING HEEL-IN DETAIL**  
NOT TO SCALE



NOTES:

1. PLACE EXPANSION JOINT WHERE DIFFERENT SIDEWALKS ABUT, AND AGAINST ANY STRUCTURE.
2. PLACE EXPANSION JOINTS 20'-0" O.C.
3. PLACE CONTRACTION JOINTS 5'-0" O.C.

**TYPICAL SIDEWALK SECTION**  
NOT TO SCALE



**CONCRETE CURBING**  
NOT TO SCALE

**ADDENDUM #3**

CAD FILE: R:\020\020-1410 Smithers - Chas\Drawings\CT-DETAILS.dwg PLOT DATE/TIME: 10/27/2021 4:10 PM LAYOUT: DET-6 USER: jonson.fisher

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DRAWN: C. WILKINSON DATE: FEBRUARY 2020
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www.thrashereng.com

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PHASE No.	
CONTRACT No.	
PROJECT No.	020-01410

SMITHERS SANITARY BOARD  
PHASE II  
SANITARY SEWER AND STORMWATER  
SEPARATION PROJECT  
STANDARD DETAILS

SHEET No.  
**DET-6**

**NORFOLK SOUTHERN  
RAILROAD PERMIT**



April 28, 2021

Ms. Anne Cavalier, Ed.D.  
*Councilwoman*  
**CITY OF SMITHERS SANTIARY BOARD**  
P.O. Box 489  
Smithers, West Virginia 25186

**RE: Proposed installation of a transverse crossing of an underground 24-inch HDPE storm water pipeline, encased in a 36-inch steel pipe.**

**Blue Ridge Division, at Mile Post WV-212.67  
Smithers, Fayette County, West Virginia  
Latitude / Longitude: 38.17148769 /-81.30420773  
NS Activity No. 1285496**

Dear Ms. Cavalier:

Attached is the fully executed Agreement dated April 16, 2021, which has been executed by Norfolk Southern Railway Company ("Railway"). Now that the agreement has been countersigned, the Licensee and/or its contractors may reach out to the following individuals to begin coordinating field services for the project:

**For Scheduling of Flagging & Construction Monitoring submit a Protection Services Coordination request online at: <https://ns.railprosp permitting.com>**

Please *reference the NS Activity Number* and upload the permit. It is recommended that the contractor or construction manager submit the request. Projects are scheduled as soon as practicable and as the completion of the construction work plan review, planning and logistics allow. Prior approval is required before commencing construction, and **entry onto Railway's property without the Division Engineer or their representative's prior approval is considered trespassing.**

NOTE: Please email to [ns.coordinator@railpros.com](mailto:ns.coordinator@railpros.com) complete as-built drawings of the Facilities in an electronic format within thirty (30) days of (i) completion of the initial installation of the Facilities and (ii) completion of any material change to the Facilities.

Sincerely,

*Deborah Marshall*

Deborah Marshall  
Real Estate Specialist

## PIPE DATA SHEET

	CARRIER PIPE	CASING PIPE
CONTENTS TO BE HANDLED	SEWER	SEWER PIPE
MAX. ALLOWABLE OPERATING PRESSURE	305 PSI	3,800 PSI
NOMINAL SIZE OF PIPE	8"	16"
OUTSIDE DIAMETER	9.05"	16.562"
INSIDE DIAMETER	7.76"	16"
WALL THICKNESS	0.646	0.281"
WEIGHT PER FOOT	11.55	42.05
MATERIAL	PVC	STEEL
PROCESS OF MANUFACTURE	N/A	N/A
SPECIFICATION	DR	ANSI
GRADE OR CLASS (Specified Minimum Yield Strength)	14	C200
TEST PRESSURE	65 PSI	N/A
TYPE OF JOINT	COMPRESSION	WELDED
TYPE OF COATING	NONE	ASPHALT
DETAILS OF CATHODIC PROTECTION	NONE	NONE
DETAILS OF SEALS OR PROTECTION AT END OF CASING	GROUT BOTH ENDS	GROUT BOTH ENDS
CHARACTER OF SUBSURFACE MATERIAL	N/A	N/A
APPROXIMATE GROUND WATER LEVEL	625-630	625-631
SOURCE OF INFORMATION ON SUBSURFACE CONDITIONS	N/A	N/A

Proposed method of installation (refer to NSCE-8 Specification):

- Bore & Jack
- Jacking
- Tunneling (with Tunnel Liner Plate)
- Directional Bore/Horizontal Direction Drilling – Method A
- Directional Bore/Horizontal Direction Drilling – Method B
- Open Cut – *All installations directly under any track must be designed as a bored installation. Open cut installations will be considered on a case-by-case basis by Norfolk Southern's Division Superintendent at the time of installation.*
- Other – Please Specify: \_\_\_\_\_



April 16, 2021

Ms. Anne Cavalier, Ed.D.  
Councilwoman  
**CITY OF SMITHERS SANTIARY BOARD**  
P.O. Box 489  
Smithers, West Virginia 25186

**RE: Proposed installation of a transverse crossing of an underground 24-inch HDPE storm water pipeline, encased in a 36-inch steel pipe.**

**Blue Ridge Division Division, at Mile Post WV-212.67  
Smithers, Fayette County, West Virginia  
Latitude / Longitude: 38.17148769 /-81.30420773  
NS Activity No. 1285496**

Dear Ms. Cavalier:

RailPros, as consultant for Norfolk Southern Railway Company ("Railway"), has reviewed the above-referenced request. Based on the information and documentation presented, Railway has no objections to the proposed work.

Attached you will find the requested offer of agreement for execution, by an official authorized to execute contract agreements on behalf of the Licensee. Please have the agreement executed via DocuSign. Note, however, that the attached offer of agreement does not constitute a binding contract, unless or until it is executed by both the Licensee and Railway.

In order for Railway to countersign the document, the following items are needed for review:

1. **Payment of the License Fee** in the amount of **\$6,000.00** within the Application System;
2. **A Certificate of Insurance** as required in the agreement, is to be submitted within the Application System.
3. **A separate Railroad Protective Liability Insurance policy**, as required in the agreement, with Railway as the named insured, and the Activity ID referenced in the description, submitted within the Application System; OR
4. The submission of the Risk Management Fee in the amount of **\$1,900.00** adds the specific project/activity to the Norfolk Southern Master Railroad Protective insurance policy, and as such no further railroad protective liability insurance coverage is necessary or requested.

**NOTE: No work shall be permitted on or about the Railway's property until the agreement becomes binding, and the Division Engineer or their authorized representative has reviewed and approved field services** for the project, such as *flagging protection, construction monitoring, and post-construction inspection services*. Once the above items are received, the fully executed agreement will be sent, along with the name and contact information for field service coordination.

If we have not received the executed agreement and corresponding payments and/or documents within six (6) months from the date of this letter, we reserve the right to cancel this request.

If you have any questions, please contact me at [deborah.marshall@railpros.com](mailto:deborah.marshall@railpros.com).

Sincerely,

*Deborah Marshall*

Deborah Marshall  
Real Estate Specialist

11819 Miracle Hills Dr., Ste 102  
Omaha, NE 68154

**P:** (402) 965-0539 **F:** (866) 762 - 7619

**www.railpros.com**

## LICENSE AGREEMENT

**THIS LICENSE AGREEMENT** (this "Agreement"), dated as of the 16<sup>th</sup> day of April, 2021 (the "Effective Date") is made and entered into by and between,

**NORFOLK SOUTHERN RAILWAY COMPANY**, a Virginia corporation, whose mailing address is Three Commercial Place, Norfolk, Virginia 23510 (hereinafter called "Railway"), and **CITY OF SMITHERS SANITARY BOARD**, a West Virginia Government Entity, whose mailing address is P.O. Box 489, Smithers WV 25186, Smithers, West Virginia 25186 (hereinafter called "Licensee").

### WITNESSETH

**WHEREAS**, Licensee has submitted to Railway an Application (as defined herein) related to the proposed installation and construction of a transverse crossing of an underground 24-inch HDPE storm water pipeline, encased in a 36-inch steel pipe (hereinafter called the "Facilities"), located in, over or under, and across the right-of-way or property and any tracks of Railway at or nearby:

- Milepost WV-212.67, Blue Ridge Division
- Latitude 38.17148769, Longitude -81.30420773
- Smithers, Fayette County, West Virginia

the same to be located in accordance with and limited to the installation shown on the diagram set forth in **EXHIBIT A** attached hereto and made a part hereof (such right-of-way or property of Railway, collectively, the "Premises"); and

**WHEREAS**, Railway has approved the Application for the initial installation and construction of the Facilities; and

**WHEREAS**, Licensee desires a license to use such right-of-way or property of Railway for the installation and construction, as well as the subsequent maintenance, operation and removal, of the Facilities.

**NOW, THEREFORE**, Railway and Licensee agree as follows:

1. Grant; Consideration; Term. Subject to Section 2(b) below, Railway hereby grants to Licensee, insofar as Railway has the right to do so, without warranty and subject to all encumbrances, covenants and easements to which the Railway's title may be subject, the right to use and occupy so much of the Premises as may be necessary for the installation, construction, maintenance, operation and removal of the Facilities (collectively, "Operate" or "Operations"). Upon execution of this Agreement, Licensee shall pay to Railway (i) a non-refundable, non-assignable, one-time license fee in the amount of SIX THOUSAND AND 00/100 DOLLARS (\$6000.00), and (ii) if applicable as determined by Railway pursuant to Section 12 below, the Risk Financing Fee in the amount of \$1,900.00 (as defined in Section 12). The term of this Agreement



shall commence on the Effective Date and shall continue for a period of twenty (20) years, subject to prior termination as hereinafter described (the "Term").

2. Use and Condition of the Premises. (a) The Premises shall be used by Licensee only for Operations and for no other purpose. Licensee accepts the Premises in their current "as is" condition, as suited for Operations, and without the benefit of any improvements to be constructed by Railway. (b) With respect to each Operations project that requires access to the Premises after the initial installation and construction of the Facilities, Licensee shall submit to Railway an application conforming to Railway's then-current standards and procedures (an "Application") for review and approval.

3. Installation of the Facilities; Railway Support. Licensee shall, at its expense, Operate the Facilities (i) on a lien-free basis and in such a manner as will not interfere with the operations of Railway, or endanger persons or property of Railway and (ii) in accordance with (a) the plans and specifications (if any) shown on the prints attached hereto and any other specifications prescribed by Railway, (b) applicable laws, regulations, ordinances and other requirements of federal, state and local governmental authorities, and (c) applicable specifications adopted by the American Railway Engineering and Maintenance-of-Way Association, when not in conflict with the applicable plans, specifications, laws, regulations, ordinances or requirements mentioned in clauses (a) and (b) above. All underground pipes must have secondary pipe containment if the material flowing through the pipeline poses a safety or environmental hazard. Any change to the character, capacity or use of the Facilities shall require execution of a new agreement. In the event it becomes necessary for Licensee to deviate from the approved plans and specifications, Licensee shall seek prior approval from Railway's Division Engineer or his or her authorized representative and, when applicable, an authorized representative of the Division Engineer in the field during Construction Monitoring. Licensee shall provide Railway with complete as-built drawings of the Facilities in an electronic format within thirty (30) days of (i) completion of the initial installation and construction of the Facilities and (ii) completion of any material change to the Facilities.

4. Railway Support. With respect to each Operations project that requires access to the Premises, Railway shall, at Railway's option, furnish, at the sole expense of Licensee, Support Services. The term "Support Services" means such materials and services as necessary, in Railway's sole judgment, to support Railway's tracks and to protect Railway's traffic, including without limitation flagging services and Construction Monitoring during Operations that require access to the Premises. Support Services shall be provided unless Railway's Division Engineer or his or her authorized representative provides to Licensee a written waiver of Support Services, whether in whole or in any part, in a given instance. The term "Construction Monitoring" means services comprised of one or more Railway representatives being assigned and present to monitor construction activities of Licensee, which may include a preconstruction site assessment and a post-construction site assessment.

5. Electronic Interference. If the Facilities cause degradation of Railway's signal, communications and other electronic systems (hereinafter collectively called the "Electronic Systems") or endanger Railway's personnel or other individuals entitled to be on or about the Premises, through inductive or electrostatic interference or otherwise, Licensee, at its expense, will

modify the Facilities to the satisfaction of Railway so as to eliminate such degradation or danger. Such modifications may include, without limiting the generality of the foregoing, transposing circuits or providing additional shielding, reactance or other corrective measures deemed necessary by Railway. The provisions of this Section 5 shall apply to the Electronic Systems existing as of the date of this Agreement and to any Electronic Systems that Railway may install in the future.

6. Corrective Measures. If Licensee fails to take any corrective measures requested by Railway in a timely manner, or if an emergency situation is presented which, in Railway's judgment, requires immediate repairs to the Facilities, Railway, at Licensee's expense, may undertake such corrective measures or repairs as it deems necessary or desirable.

7. Railway Changes. If Railway shall make any changes, alterations or additions to the line, grade, tracks, structures, roadbed, installations, right-of-way or works of Railway, or to the character, height or alignment of the Electronic Systems, at or near the Facilities, Licensee shall, upon thirty (30) days prior written notice from Railway and at its sole expense, make such changes in the location and character of the Facilities as, in the opinion of the chief engineering officer of Railway, shall be necessary or appropriate to accommodate any construction, improvements, alterations, changes or additions of Railway.

8. Assumption of Risk. Unless caused solely by the negligence of Railway or caused solely by the willful misconduct of Railway, Licensee hereby assumes all risk of damage to the Facilities and Licensee's other property relating to its use and occupation of the Premises or business carried on the Premises and any defects to the Premises; and Licensee hereby indemnifies Railway, its officers, directors, agents and employees from and against any liability for such damage.

9. Entry Upon Premises. Licensee shall enter the Premises in any given instance only pursuant to an approved Application. Prior to commencement of any work to be performed on or about the Premises, Licensee shall notify the appropriate Division Engineer or their authorized representative for the scheduling of Support Services as determined pursuant to Section 4 above. Within seventy-two (72) hours after the Division Engineer's actual receipt of such notification, the Division Engineer shall review the necessity and availability of flagmen for the proposed work and advise Licensee of such matters and the estimated cost of Support Services. No work shall be permitted on or about the Premises without the presence of Railway's flagman or the Division Engineer's waiver of the requirement for flag protection. Entry on or about the Premises or any other Railway right-of-way without the Division Engineer's prior approval shall be deemed trespassing. Licensee agrees to pay Railway, within thirty (30) days after delivery of an invoice therefor, for the cost of Support Services provided by or on behalf of Railway.

10. Liens; Taxes. Licensee will not permit any mechanic's liens or other liens to be placed upon the Premises, and nothing in this Agreement shall be construed as constituting the consent or request of Railway, express or implied, to any person for the performance of any labor or the furnishing of any materials to the Premises, nor as giving Licensee any right, power or authority to contract for or permit the rendering of any services or the furnishing of any materials that could give rise to any mechanic's liens or other liens against the Premises. In addition,

Licensee shall be liable for all taxes levied or assessed against the Facilities and any other equipment or other property placed by Licensee within the Premises. In the event that any such lien shall attach to the Premises or Licensee shall fail to pay such taxes, then, in addition to any other right or remedy available to Railway, Railway may, but shall not be obligated to, discharge the same. Any amount paid by Railway for any of the aforesaid purposes, together with related court costs, attorneys' fees, fines and penalties, shall be paid by Licensee to Railway within ten (10) days after Railway's demand therefor.

11. Indemnification. Licensee hereby agrees to indemnify and save harmless Railway, its officers, directors, agents and employees, from and against any and all liabilities, claims, losses, damages, expenses (including attorneys' fees) or costs for personal injuries (including death) and property damage to whomsoever or whatsoever occurring (hereinafter collectively, "Losses") that arise in any manner from (a) the presence of the Facilities on or about the Premises, (b) any Operations or any failure to conduct Operations properly, or (c) any act, omission or neglect of Licensee, its agents, servants, employees or contractors in connection therewith, unless caused solely by the negligence of Railway or caused solely by the willful misconduct of Railway.

12. Insurance.

I. Insurance Requirements. Without limiting in any manner the liability and obligations assumed by Licensee under any other provision of this Agreement, and as additional protection to Railway, Licensee shall comply with the following provisions:

(i) Licensee shall pay Railway a Risk Financing Fee in the amount of \$1,900 in conjunction with each Operations project on or about the Premises. A separate Risk Financing Fee shall be required each and every time the Premises are entered for a specific project. For purposes of illustration, a project requiring a separate RPL policy could include a one-day property inspection of a multi-month utility relocation. Licensee may submit inquiries about RPL issues at [ns.permitting@railpros.com](mailto:ns.permitting@railpros.com). At the Licensee's option, rather than pay a Risk Financing fee, Licensee shall purchase a commercial Railroad Protective Liability (RPL) insurance policy for Railway as described in (a). In the event that the value of a project exceeds \$350,000, Licensee shall be required to use Option A, below;

Option A. In lieu of paying the Risk Financing Fee, Licensee shall purchase a commercial RPL policy with Limits of \$2,000,000 per occurrence and \$6,000,000 in the aggregate. In the event that a project's value exceeds \$350,000 a commercial RPL shall be purchased with limits of \$5,000,000 per occurrence and \$10,000,000 in the aggregate. The RPL policy shall conform to CG 00 34 04 13 or equivalent and include coverage for Terrorism and the Physical Damage to Property Endorsement and shall name Norfolk Southern Corporation, affiliates and subsidiaries as the insured. The job location, Licensee and description must appear on the declaration pages. Prior to any activity beginning under this License, an electronic copy of the RPL policy, not simply the binder, shall be submitted to [ns.permitting@railpros.com](mailto:ns.permitting@railpros.com).

(ii) A Commercial General Liability (“CGL”) policy containing products and completed operations and contractual liability coverage, with a combined single limit of not less than \$2,000,000 for each occurrence. Any portion of this requirement may be satisfied by a combination of General Liability and/or Excess/Umbrella Liability Coverage. The policy shall not deny any obligation of any insured under the Federal Employer’s Liability Act, as amended. The CGL policy shall provide additional insured coverage equivalent to ISO CG 20 10 11/85.

(iii) Automobile Liability Insurance with a current ISO occurrence form policy (or equivalent) and apply on an “any auto” (Symbol 1) basis, including coverage for all vehicles used in connection with the Work or Services on the leased property, providing annual limits of at least \$1,000,000 per occurrence for bodily injury and property damage combined including uninsured and underinsured motorist coverage, medical payment protection, and loading and unloading.

(iv) Workers’ Compensation Insurance to meet fully the requirement of any compensation act, plan or legislative enactment applicable in connection with the death, disability or injury of Licensee’s officers, agents, servants or employees arising directly or indirectly out of the performance of this Agreement;

(v) Employers’ Liability Insurance with limits of not less than \$1,000,000 each accident \$1,000,000 policy limit for disease, and \$1,000,000 each employee for disease;

(vi) Prior to commencement of each Operations project that requires access to the Premises, including the initial installation and construction of the Facilities, unless Railway elects to make available and Licensee pays the Risk Financing Fee for a given Operations project on or about the Premises, Licensee, or its contractor if it employs one, shall furnish Railway with an original RPL Insurance policy naming Railway as the named insured and having a limit of not less than a combined single limit of \$2,000,000 each occurrence and \$6,000,000 aggregate. Such policy shall be written using Insurance Services Offices Form Numbers CG 00 35 01 10 01.

II. General Insurance Requirements. Each insurance policy referred to in Section I above shall also comply with the following requirements:

(i) Additional Insureds. All insurance required by this Exhibit (excluding any RPL policy and Workers’ Compensation policy) shall name Railway and its parent, subsidiary and affiliated companies as additional insureds with an appropriate endorsement to each policy.

(ii) Licensee’s Coverage Primary and Without Right to Contribution. All policies secured by Licensee, whether primary, excess, umbrella or otherwise, and providing coverage to the Railway as an additional insured (i) are intended to take priority in responding and to pay before any insurance policies Railway may have secured for itself must respond or pay and (ii) may not seek contribution from any policies the Railway may have secured for itself.

(iii) Severability of Interests (Cross Liability). No cross-liability exclusions are permitted that would apply to the additional insureds, and there may not be any restrictions in any policy that limits coverage for a claim brought by an additional insured against a named insured.

(iv) Waiver of Subrogation. To the fullest extent permitted by law, all insurance furnished by Licensee in compliance with Section 14 shall include a waiver of subrogation in favor of Railway with an appropriate endorsement to each policy.

(v) Notice of Cancellation, Modification or Termination. All policies required under this Exhibit shall not be subject to cancellation, termination, modification, changed, or non-renewed except upon thirty (30) days prior written notice to the additional insureds.

(vi) No Limitation. The insurance coverages maintained by Licensee shall not limit any of Licensee's indemnity obligations or other liabilities under this Agreement. The insurance available to Railway and its parent, subsidiary and affiliated companies as additional insureds shall not be limited by these requirements should Licensee maintain higher coverage limits.

(vii) Any deductibles or self-insured retentions of Licensee over \$50,000 must be declared and approved by Railway. Approval of such requests shall not be unreasonably withheld.

(viii) Licensee shall require all subcontractors who are not covered by the insurance carried by Licensee to maintain the insurance coverage described in this Exhibit except for the RPL insurance, including but not limited to additional insured status for Railway and its parent, subsidiary and affiliated companies.

(ix) Licensee shall furnish electronically certificates of insurance and the RPL Insurance Policy to Railway's Managing Agent prior to execution of this Agreement at [ns.permitting@railpros.com](mailto:ns.permitting@railpros.com). The insurance coverage required herein shall in no way limit Licensee's liability under this Agreement.

13. Environmental Matters. Licensee assumes all responsibility for any environmental obligations imposed under applicable laws, regulations, ordinances or other requirements of federal, state and local governmental authorities relating to (a) any Operations, including notification and reporting of any releases, and (b) any contamination of any property, water, air or groundwater arising or resulting, in whole or in part, from Licensee's operation or use of the Premises pursuant to this Agreement. In addition, Licensee shall obtain any necessary permits to conduct Operations. Licensee agrees to indemnify and hold harmless Railway from and against any and all fines, penalties, demands or other Losses (including attorneys' fees) incurred by Railway or claimed by any person, company or governmental entity relating to (a) any contamination of any property, water, air or groundwater due to the use or presence of the Facilities on the Premises, (b) Licensee's violation of any laws, regulations or other requirements of federal, state or local governmental authorities in connection with the use or presence of the Facilities on

the Premises or (c) any violation of Licensee's obligations imposed under this Section. Without limitation, this indemnity provision shall extend to any cleanup and investigative costs relating to any contamination of the Premises arising or resulting from, in whole or in part, Licensee's use of the Facilities or any other activities by or on behalf of Licensee occurring on or about the Premises. Licensee further agrees not to dispose of any trash, debris or wastes, including hazardous waste, on the Premises and will not conduct any activities on the Premises which would require a hazardous waste treatment, storage or disposal permit.

14. Assignments and Other Transfers.

(a) Licensee shall not assign, transfer, sell, mortgage, encumber, sublease or otherwise convey (whether voluntarily, involuntarily or by operation of law) this Agreement or any interest therein, nor license, mortgage, encumber or otherwise grant to any other person or entity (whether voluntarily, involuntarily or by operation of law) any right or privilege in or to the Premises (or any interest therein), in whole or in part, without the prior written consent of Railway, which consent may be withheld by Railway in its sole discretion. Any such assignment or other transfer made without Railway's prior written consent shall be null and void and, at Railway's option, shall constitute an immediate default of this Agreement. Notwithstanding the foregoing, upon prior written notice to Railway, Licensee may assign this Agreement to a parent, a wholly-owned subsidiary of Licensee or a wholly-owned subsidiary of Licensee's parent without Railway's consent; provided, however, that no such assignment shall relieve Licensee of its obligations under this Agreement.

(b) Railway shall have the right to transfer and assign, in whole or in part, all its rights and obligations hereunder and in or to the Premises. From and after the effective date of any such assignment or transfer, Railway shall be released from any further obligations hereunder; and Licensee shall look solely to such successor-in-interest of Railway for the performance of the obligations of "Railway" hereunder.

15. Meaning of "Railway". The word "Railway" as used herein shall include any other company whose property at the aforesaid location may be leased or operated by Railway. Said term also shall include Railway's officers, directors, agents and employees, and any parent company, subsidiary or affiliate of Railway and their respective officers, directors, agents and employees.

16. Default: Remedies.

(a) The following events shall be deemed to be events of default by Licensee under this Agreement:

(i) Licensee shall fail to pay the Fee or any other sum of money due hereunder and such failure shall continue for a period of ten (10) days after the due date thereof;

(ii) Licensee shall fail to comply with any provision of this Agreement not requiring the payment of money, all of which terms, provisions and covenants shall be

deemed material, and such failure shall continue for a period of thirty (30) days after written notice of such default is delivered to Licensee;

(iii) Licensee shall become insolvent or unable to pay its debts as they become due, or Licensee notifies Railway that it anticipates either condition;

(iv) Licensee takes any action to, or notifies Railway that Licensee intends to file a petition under any section or chapter of the United States Bankruptcy Code, as amended from time to time, or under any similar law or statute of the United States or any State thereof; or a petition shall be filed against Licensee under any such statute; or

(v) A receiver or trustee shall be appointed for Licensee's license interest hereunder or for all or a substantial part of the assets of Licensee, and such receiver or trustee is not dismissed within sixty (60) days of the appointment.

(b) Upon the occurrence of any event or events of default by Licensee, whether enumerated in this Section or not, Railway shall have the option to pursue any remedies available to it at law or in equity without any additional notices to Licensee. Railway's remedies shall include, but not be limited to, the following: (i) termination of this Agreement, in which event Licensee shall immediately surrender the Premises to Railway; (ii) entry into or upon the Premises to do whatever Licensee is obligated to do under the terms of this License, in which event Licensee shall reimburse Railway on demand for any expenses which Railway may incur in effecting compliance with Licensee's obligations under this License, but without rendering Railway liable for any damages resulting to Licensee or the Facilities from such action; and (iii) pursuit of all other remedies available to Railway at law or in equity, including, without limitation, injunctive relief of all varieties.

17. Railway Termination Right. Notwithstanding anything to the contrary in this Agreement, Railway shall have the right to terminate this Agreement and the rights granted hereunder, after delivering to Licensee written notice of such termination no less than sixty (60) days prior to the effective date thereof, upon the occurrence of any one or more of the following events:

(a) If Licensee shall fail to install the Facilities within one (1) year from the date of the Agreement, or if Licensee shall discontinue the use or operations of the Facilities for one (1) year; or

(b) If Railway shall be required by any governmental authority having jurisdiction over the Premises to remove, relocate, reconstruct or discontinue operation of its railroad on or about the Premises; or

(c) If Railway, in the good faith judgment of its Superintendent, shall require a change in the location or elevation of its railroad on or about the location of the Facilities or the Premises that might effectively prohibit the use or operation of the Facilities; or

(d) If Railway, in the good faith judgment of its Superintendent, determines that one or more aspects of Operations unduly interfere with the operation and maintenance of the facilities of Railway, or with the present or future use of such property by Railway, its lessees, affiliates, successors or assigns, for their respective purposes.

18. Condemnation. If the Premises or any portion thereof shall be taken or condemned in whole or in part for public purposes, or sold in lieu of condemnation, then this Agreement and the rights granted to Licensee hereunder shall, at the sole option of Railway, forthwith cease and terminate. All compensation awarded for any taking (or sale proceeds in lieu thereof) shall be the property of Railway, and Licensee shall have no claim thereto, the same being hereby expressly waived by Licensee.

19. Removal of Facilities: Survival. The Facilities are and shall remain the personal property of Licensee. Upon the expiration or termination of this Agreement, Licensee shall remove the Facilities from the Premises within thirty (30) days after the effective date thereof. In performing such removal, unless otherwise directed by Railway, Licensee shall restore the Premises to the same condition as existed prior to the installation or placement of Facilities, reasonable wear and tear excepted. In the event Licensee shall fail to so remove the Facilities or restore the Premises, the Facilities shall be deemed to have been abandoned by Licensee, and the same shall become the property of Railway for Railway to use, remove, destroy or otherwise dispose of at its discretion and without responsibility for accounting to Licensee therefor; provided, however, in the event Railway elects to remove the Facilities, Railway, in addition to any other legal remedy it may have, shall have the right to recover from Licensee all costs incurred in connection with such removal and the restoration of the Premises. Notwithstanding anything to the contrary contained in this Agreement, the expiration or termination of this Agreement, whether by lapse of time or otherwise, shall not relieve Licensee from Licensee's obligations accruing prior to the expiration or termination date, and such obligations shall survive any such expiration or other termination of this Agreement.

20. Entire Agreement. This Agreement contains the entire agreement of Railway and Licensee and supersedes any prior understanding or agreement between Railway and Licensee respecting the subject matter hereof, and no representations, warranties, inducements, promises or agreements, oral or otherwise, between the parties not embodied in this Agreement shall be of any force or effect.

21. Attorneys' Fees. If Railway should bring any action under this Agreement or consult or place the Agreement or any amount payable by Licensee hereunder, with an attorney concerning or for the enforcement of any of Railway's rights hereunder, then Licensee agrees in each and any such case to pay to Railway all costs, including but not limited to court costs and attorneys' fees, incurred in connection therewith.

22. Severability. If any clause or provision of this Agreement is illegal, invalid or unenforceable under present or future laws effective during the Term, then and in that event, it is the intention of the parties hereto that the remainder of this Agreement shall not be affected thereby; and it is also the intention of the parties to this Agreement that in lieu of each clause or provision of this Agreement that is illegal, invalid or unenforceable, there be added as a part of



this Agreement a clause or provision as similar in terms to such illegal, invalid or unenforceable clause or provision as may be possible and be legal, valid and enforceable.

23. Modifications; Waiver; Successors and Assigns. This Agreement may not be altered, changed or amended, except by instrument in writing signed by both parties hereto. No provision of this Agreement shall be deemed to have been waived by Railway unless such waiver shall be in a writing signed by Railway and addressed to Licensee, nor shall any custom or practice that may evolve between the parties in the administration of the terms hereof be construed to waive or lessen the right of Railway to insist upon the performance by Licensee in strict accordance with the terms hereof. The terms and conditions contained in this Agreement shall apply to, inure to the benefit of, and be binding upon the parties hereto, and upon their respective successors in interest and legal representatives, except as otherwise herein expressly provided. If there shall be more than one Licensee, the obligations hereunder imposed upon Licensee shall be joint and several.

24. Notice. Any and all other notices, demands or requests by or from Railway to Licensee, or Licensee to Railway, shall be in writing and shall be sent by (a) postage paid, certified mail, return receipt requested, or (b) a reputable national overnight courier service with receipt therefor, or (c) personal delivery, and addressed in each case as follows:

If to Railway:  
c/o Norfolk Southern Corporation  
1200 Peachtree Street, NE - 12<sup>th</sup> Floor  
Atlanta, Georgia 30309-3504  
Attention: Director Real Estate

If to Licensee:  
CITY OF SMITHERS SANITARY BOARD,  
PO Box 489  
Smithers, WV 25186  
Attention: Anne Cavalier, Ed.D.

Either party may, by notice in writing, direct that future notices or demands be sent to a different address. All notices hereunder shall be deemed given upon receipt (or, if rejected, upon rejection).

25. Miscellaneous. Time is of the essence with regard to each provision of this Agreement. This Agreement shall be construed and interpreted in accordance with and governed by the laws of the State in which the Premises are located. Each covenant of Railway and Licensee under this Agreement is independent of each other covenant under this Agreement. No default in performance of any covenant by a party shall excuse the other party from the performance of any other covenant. The provisions of this Agreement that, by their nature, are intended to survive the expiration or earlier termination of this Agreement, including Sections 8, 10, 11, 13 and 19, shall so survive.

26. Limitations of Grant. Licensee acknowledges that the license granted hereunder is a quitclaim grant, made without covenants, representations or warranties with respect to Railway's (a) right to make the grant, (b) title in the Premises, or (c) right to use or make available to others the Premises for the purposes contemplated herein. Railway is the owner and/or holder of the Premises subject to the terms and limitations under which it is owned or held, including without limitation conditions, covenants, restrictions, easements (including any pre-existing fiber optic easements or licenses), encroachments, leases, licenses, permits, mortgages, indentures, reversionary interests, fee interests, zoning restrictions and other burdens and limitations, of record and not of record, and to rights of tenants and licensees in possession, and Licensee agrees that the rights licensed hereunder are subject and subordinate to each and all of the foregoing. Licensee accepts this grant knowing that others may claim that Railway has no right to make it, and Licensee agrees to release, hold harmless and indemnify (and, at Railway's election, defend, at Licensee's sole expense, with counsel approved by Railway) Railway, its affiliated companies, and its and their respective officers, directors, agents and employees, from and against any detriments to, or liabilities of, any type or nature arising from such claims, including punitive damages and any forfeitures declared or occurring as a result of this grant.

27. Limitations Upon Damages. Notwithstanding any other provision of this Agreement, Railway shall not be liable for breach of this Agreement or under this Agreement for any consequential, incidental, exemplary, punitive, special, business damages or lost profits, as well as any claims for death, personal injury, and property loss and damage which occurs by reason of, or arises out of, or is incidental to the interruption in or usage of the Facilities placed upon or about the Premises by Licensee, including without limitation any damages under such claims that might be considered consequential, incidental, exemplary, punitive, special, business damages or lost profits. It is understood and agreed by Licensee that Railway cannot and will not make any warranties, representations or guarantees that Licensee's communication system (if any), as located on Railway's property, will not be interrupted.

*[Signature Page Follows]*

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in duplicate, each part being an original, as of the date first above written.

Witness:

**NORFOLK SOUTHERN RAILWAY  
COMPANY**

DocuSigned by:  
*Kayna Hallaway*  
853F8C948034405...  
As to Railway

DocuSigned by:  
*John Jones*  
By: \_\_\_\_\_  
Real Estate Manager

Witness:

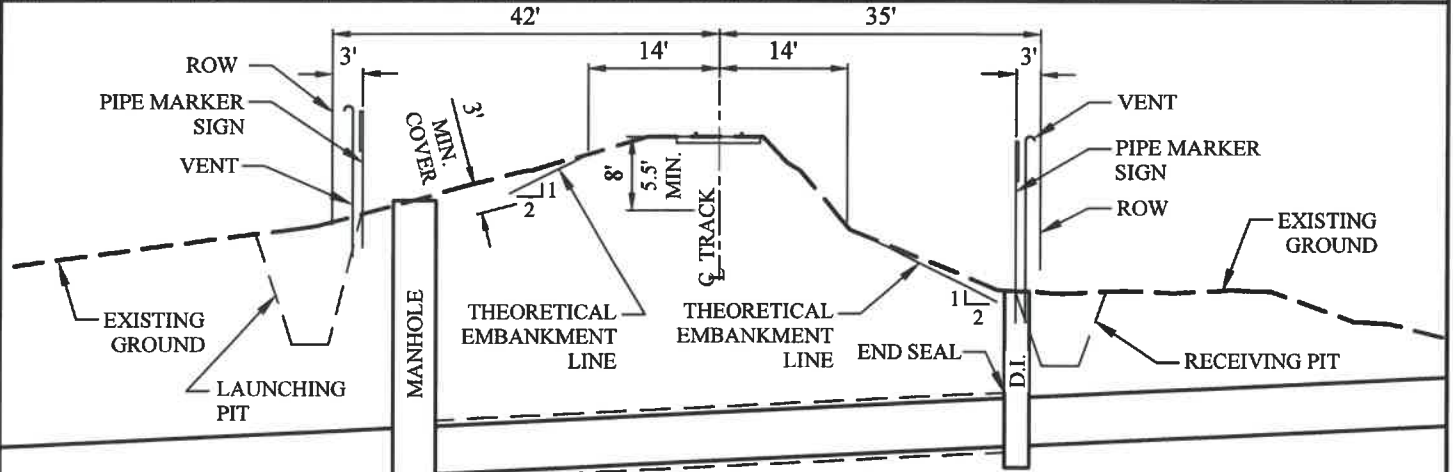
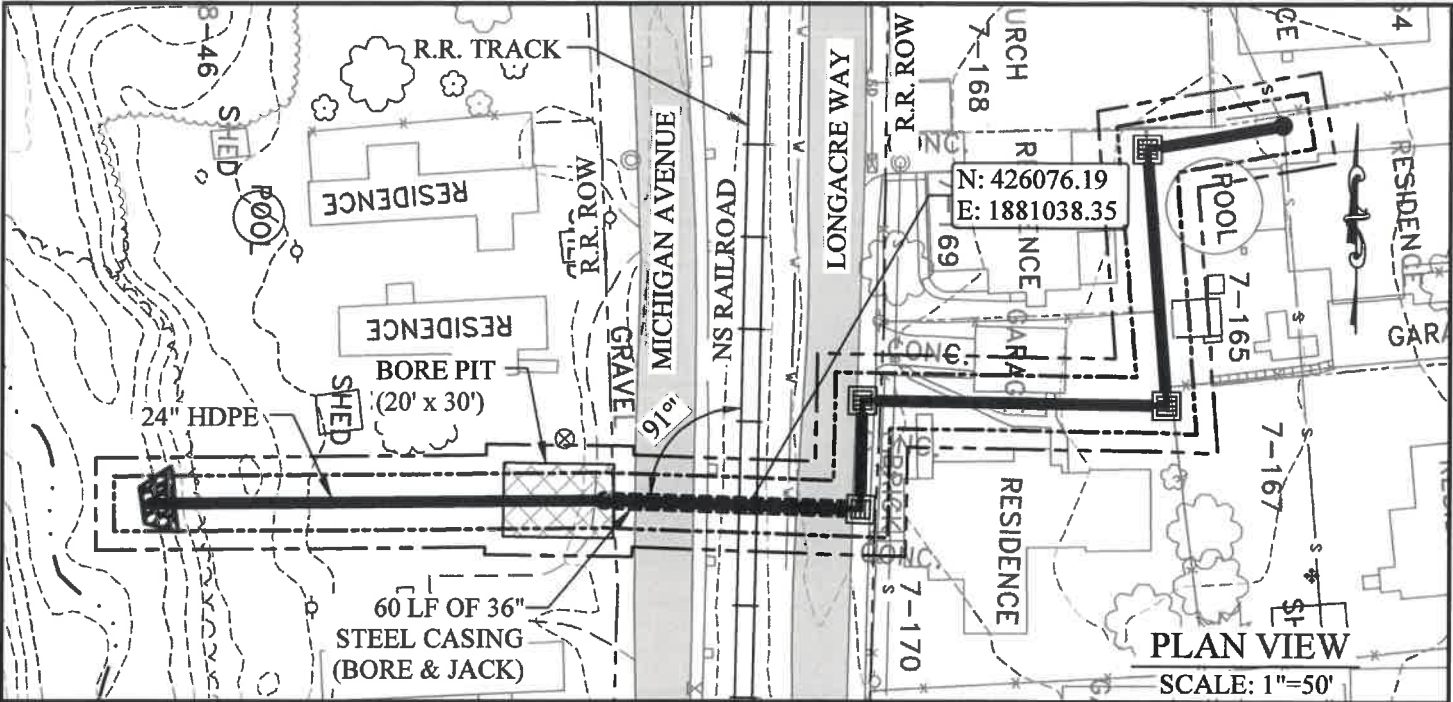
**CITY OF SMITHERS SANITARY BOARD**

As to Licensee

By: \_\_\_\_\_  
DocuSigned by:  
*City Of Smithers (Licensee/Facility Owner)*  
Title: \_\_\_\_\_  
E389B4DDD2104F4...

Activity Number: 1285496  
DDM: 04/16/2021





**General Notes**  
 All plans shall include the following General Notes:  
 Contractor shall follow all requirements of Norfolk Southern's NSCE-8 Specifications.  
 Pipeline and Crossing to be installed and maintain in accordance with last approved AMERICAN RAILWAY ENGINEERING AND MAINTENANCE OF WAY ASSOCIATION Specifications for Pipelines Conveying Flammable and Non-flammable Substance.  
 Blasting Not Permitted.

VAL. MAP V-308-W.V./46

**PROFILE VIEW**

SCALE: HORZ. 1"=20'  
 VERT. 1"=10'

Contents to be handled  
 Outside diameter  
 Pipe material  
 Specifications and Grade  
 Wall thickness  
 Actual working pressure  
 Type of joint  
 Coating  
 Method of installation  
 Vents: No. N/A Size \_\_\_\_\_ Hgt. above ground \_\_\_\_\_  
 Seal: Both ends GROUT One end \_\_\_\_\_  
 Bury: Base of rail to top of casing 8 ft. 0 in.  
 Bury: (Not beneath tracks) 4 ft. 6 in.  
 Bury: (Roadway ditches) 4 ft. 0 in.  
 Cathodic protection: NONE  
 Type, size and spacing of insulators or supports SEE ATTACHMENT

Carrier Pipe	Casing Pipe
<u>STORM</u>	<u>CARRIER PIPE</u>
<u>24"</u>	<u>36"</u>
<u>HDPE</u>	<u>STEEL</u>
<u>DR 17</u>	<u>GRADE B</u>
<u>1.41"</u>	<u>0.375"</u>
<u>N/A</u>	<u>N/A</u>
<u>NONE</u>	<u>NONE</u>
<u>SLIDE THROUGH BORE &amp; JACK</u>	
Vents: No. <u>N/A</u> Size _____ Hgt. above ground _____	
Seal: Both ends <u>GROUT</u> One end _____	
Bury: Base of rail to top of casing <u>8</u> ft. <u>0</u> in.	
Bury: (Not beneath tracks) <u>4</u> ft. <u>6</u> in.	
Bury: (Roadway ditches) <u>4</u> ft. <u>0</u> in.	
Cathodic protection: <u>NONE</u>	
Type, size and spacing of insulators or supports SEE ATTACHMENT	

**EXHIBIT A**  
 NORFOLK SOUTHERN RAILWAY COMPANY  
(Accompanying Agreement) #14  
 CITY OF SMITHERS SANITARY BOARD  
 Activity No.: 1285496, E.S.: 17815+75  
 Division: Blue Ridge, Mile Post: 75V-212.67  
 Val Sec: 308, Map No. 46  
 City: Smithers, County: Wayne, State: WV  
 Lat: 38.17148769, Long: -81.30420775

All work to be performed in accordance with the latest approved Bridge Structures 1902-4 and 1802-4 Specifications

**BLASTING NOT PERMITTED**

**SMITHERS, WEST VIRGINIA**  
**SMITHERS SANITARY BOARD**  
**1,072' TO MILE POST NA-154**

**PX** 000000 (2) 07/16/2020



September 20, 2021

City Of Smithers  
**CITY OF SMITHERS SANITARY BOARD**  
175 Michigan Avenue  
Smithers, West Virginia 25186

**RE: Proposed installation of a transverse crossing of a 24-inch HDPE storm water pipe, in a 36-inch steel casing pipe**

**Blue Ridge Division, at Mile Post WV-212.81  
Smithers, Fayette County, West Virginia  
Latitude / Longitude: 38.1693688 / -81.30422171  
NS Activity No. 1285520**

Dear City of Smithers:

Attached is the fully executed License Agreement dated September 08, 2021, which has been executed by Norfolk Southern Railway Company ("Railway"). Now that the agreement has been countersigned, the Licensee and/or its contractors may reach out to the following individuals to begin coordinating field services for the project:

**For Scheduling of Flagging & Construction Monitoring submit a Protection Services Coordination request online at: <https://ns.railprospertmitting.com>**

Please *reference the NS Activity Number* and upload the permit. It is recommended that the contractor or construction manager submit the request. Projects are scheduled as soon as practicable and as the completion of the construction work plan review, planning and logistics allow. Prior approval is required before commencing construction, and **entry onto Railway's property without the Division Engineer or their representative's prior approval is considered trespassing.**

NOTE: Please email to [ns.coordinator@railpros.com](mailto:ns.coordinator@railpros.com) complete as-built drawings of the Facilities in an electronic format within thirty (30) days of (i) completion of the initial installation of the Facilities and (ii) completion of any material change to the Facilities.

If you have any questions, please contact me within the "Messages" Tab of the Application System.

Sincerely,

A handwritten signature in black ink that reads "Norma J. Reynolds".

Norma J. Reynolds  
*Real Estate Specialist*

## PIPE DATA SHEET

	CARRIER PIPE	CASING PIPE
CONTENTS TO BE HANDLED	STORM WATER	STORMWATER PIPE
MAX. ALLOWABLE OPERATING PRESSURE	100 PSI	3800
NOMINAL SIZE OF PIPE	24	36
OUTSIDE DIAMETER	23.82	36
INSIDE DIAMETER	21.007	35.25
WALL THICKNESS	1.412	0.75
WEIGHT PER FOOT	4.71	142.68
MATERIAL	HDPE	STEEL
PROCESS OF MANUFACTURE	N/A	N/A
SPECIFICATION	DR	ANSI
GRADE OR CLASS (Specified Minimum Yield Strength)	21	C200
TEST PRESSURE	N/A	N/A
TYPE OF JOINT	COMPRESSION	WELDED
TYPE OF COATING	NONE	ASPHALT
DETAILS OF CATHODIC PROTECTION	NONE	NONE
DETAILS OF SEALS OR PROTECTION AT END OF CASING	GROUT BOTH ENDS	GROUT BOTH ENDS
CHARACTER OF SUBSURFACE MATERIAL	N/A	N/A
APPROXIMATE GROUND WATER LEVEL	625-630	625-631
SOURCE OF INFORMATION ON SUBSURFACE CONDITIONS	N/A	N/A

Proposed method of installation (refer to NSCE-8 Specification):

- Bore & Jack
- Jacking
- Tunneling (with Tunnel Liner Plate)
- Directional Bore/Horizontal Direction Drilling – Method A
- Directional Bore/Horizontal Direction Drilling – Method B
- Open Cut – *All installations directly under any track must be designed as a bored installation. Open cut installations will be considered on a case-by-case basis by Norfolk Southern's Division Superintendent at the time of installation.*
- Other – Please Specify: \_\_\_\_\_

## LICENSE AGREEMENT

**THIS LICENSE AGREEMENT** (this "Agreement"), dated as of September 8, 2021 (the "Effective Date") is made and entered into by and between

**NORFOLK SOUTHERN RAILWAY COMPANY**, a Virginia corporation, whose mailing address is Three Commercial Place, Norfolk, Virginia, 23510 (hereinafter called "Railway"), and **CITY OF SMITHERS SANITARY BOARD**, a West Virginia municipal corporation, whose mailing address is PO Box 489, Smithers, West Virginia 25186 (hereinafter called "Licensee").

### WITNESSETH

**WHEREAS**, Licensee has submitted to Railway an Application (as defined herein) related to the proposed installation and construction of a transverse crossing of a 24-inch HDPE storm water pipe, in a 36-inch steel casing pipe (hereinafter called the "Facilities") located in, over or under, and across the right-of-way or property and any tracks of Railway at or near:

- Milepost WV-212.81, Blue Ridge Division
- Latitude 38.1693688, Longitude -81.30422171
- Smithers, Fayette County, West Virginia

the same to be located in accordance with and limited to the installation shown on the diagram set forth in **EXHIBIT A** attached hereto and made a part hereof (such right-of-way or property of Railway, collectively, the "Premises"); and

**WHEREAS**, Railway has approved the Application for the initial installation and construction of the Facilities; and

**WHEREAS**, Licensee desires a license to use such right-of-way or property of Railway for the installation and construction, as well as the subsequent maintenance, operation and removal, of the Facilities.

**NOW, THEREFORE**, Railway and Licensee agree as follows:

1. Grant; Consideration; Term. Subject to Section 2(b) below, Railway hereby grants to Licensee, insofar as Railway has the right to do so, without warranty and subject to all encumbrances, covenants and easements to which the Railway's title may be subject, the right to use and occupy so much of the Premises as may be necessary for the installation, construction, maintenance, operation and removal of the Facilities (collectively, "Operate" or "Operations"). Upon execution of this Agreement, Licensee shall pay to Railway (i) a non-refundable, non-assignable, one-time license fee in the amount of SIX THOUSAND 00/100 DOLLARS (\$6,000.00), and (ii) if applicable as determined by Railway pursuant to Section 12 below, the Risk Financing Fee (as defined in Section 12). The term of this Agreement shall commence on the Effective Date and shall continue for a period of twenty (20) years, subject to prior termination as hereinafter described (the "Term").

2. Use and Condition of the Premises.

(a) The Premises shall be used by Licensee only for Operations and for no other purpose. Licensee accepts the Premises in their current "as is" condition, as suited for Operations, and without the benefit of any improvements to be constructed by Railway.

(b) With respect to each Operations project that requires access to the Premises after the initial installation and construction of the Facilities, Licensee shall submit to Railway an application conforming to Railway's then-current standards and procedures (an "Application") for review and approval.

3. Installation of the Facilities; Railway Support. Licensee shall, at its expense, Operate the Facilities (i) on a lien-free basis and in such a manner as will not interfere with the operations of Railway, or endanger persons or property of Railway and (ii) in accordance with (a) the plans and specifications (if any) shown on the prints attached hereto and any other specifications prescribed by Railway, (b) applicable laws, regulations, ordinances and other requirements of federal, state and local governmental authorities, and (c) applicable specifications adopted by the American Railway Engineering and Maintenance-of-Way Association, when not in conflict with the applicable plans, specifications, laws, regulations, ordinances or requirements mentioned in clauses (a) and (b) above. All underground pipes must have secondary pipe containment if the material flowing through the pipeline poses a safety or environmental hazard. Any change to the character, capacity or use of the Facilities shall require execution of a new agreement. In the event it becomes necessary for Licensee to deviate from the approved plans and specifications, Licensee shall seek prior approval from Railway's Division Engineer or his or her authorized representative and, when applicable, an authorized representative of the Division Engineer in the field during Construction Monitoring. Licensee shall provide Railway with complete as-built drawings of the Facilities in an electronic format within thirty (30) days of (i) completion of the initial installation and construction of the Facilities and (ii) completion of any material change to the Facilities.

4. Railway Support. With respect to each Operations project that requires access to the Premises, Railway shall, at Railway's option, furnish, at the sole expense of Licensee, Support Services. The term "Support Services" means such materials and services as necessary, in Railway's sole judgment, to support Railway's tracks and to protect Railway's traffic, including without limitation flagging services and Construction Monitoring during Operations that require access to the Premises. Support Services shall be provided unless Railway's Division Engineer or his or her authorized representative provides to Licensee a written waiver of Support Services, whether in whole or in any part, in a given instance. The term "Construction Monitoring" means services comprised of one or more Railway representatives being assigned and present to monitor construction activities of Licensee, which may include a preconstruction site assessment and a post-construction site assessment.

5. Electronic Interference. If the Facilities cause degradation of Railway's signal, communications and other electronic systems (hereinafter collectively called the "Electronic Systems") or endanger Railway's personnel or other individuals entitled to be on or about the



Premises, through inductive or electrostatic interference or otherwise, Licensee, at its expense, will modify the Facilities to the satisfaction of Railway so as to eliminate such degradation or danger. Such modifications may include, without limiting the generality of the foregoing, transposing circuits or providing additional shielding, reactance or other corrective measures deemed necessary by Railway. The provisions of this Section 5 shall apply to the Electronic Systems existing as of the date of this Agreement and to any Electronic Systems that Railway may install in the future.

6. Corrective Measures. If Licensee fails to take any corrective measures requested by Railway in a timely manner, or if an emergency situation is presented which, in Railway's judgment, requires immediate repairs to the Facilities, Railway, at Licensee's expense, may undertake such corrective measures or repairs as it deems necessary or desirable.

7. Railway Changes. If Railway shall make any changes, alterations or additions to the line, grade, tracks, structures, roadbed, installations, right-of-way or works of Railway, or to the character, height or alignment of the Electronic Systems, at or near the Facilities, Licensee shall, upon thirty (30) days prior written notice from Railway and at its sole expense, make such changes in the location and character of the Facilities as, in the opinion of the chief engineering officer of Railway, shall be necessary or appropriate to accommodate any construction, improvements, alterations, changes or additions of Railway.

8. Assumption of Risk. Unless caused solely by the negligence of Railway or caused solely by the willful misconduct of Railway, Licensee hereby assumes all risk of damage to the Facilities and Licensee's other property relating to its use and occupation of the Premises or business carried on the Premises and any defects to the Premises; and Licensee hereby indemnifies Railway, its officers, directors, agents and employees from and against any liability for such damage.

9. Entry Upon Premises. Licensee shall enter the Premises in any given instance only pursuant to an approved Application. Prior to commencement of any work to be performed on or about the Premises, Licensee shall notify the appropriate Division Engineer or their authorized representative for the scheduling of Support Services as determined pursuant to Section 4 above. Within seventy-two (72) hours after the Division Engineer's actual receipt of such notification, the Division Engineer shall review the necessity and availability of flagmen for the proposed work and advise Licensee of such matters and the estimated cost of Support Services. No work shall be permitted on or about the Premises without the presence of Railway's flagman or the Division Engineer's waiver of the requirement for flag protection. Entry on or about the Premises or any other Railway right-of-way without the Division Engineer's prior approval shall be deemed trespassing. Licensee agrees to pay Railway, within thirty (30) days after delivery of an invoice therefor, for the cost of Support Services provided by or on behalf of Railway.

10. Liens; Taxes. Licensee will not permit any mechanic's liens or other liens to be placed upon the Premises, and nothing in this Agreement shall be construed as constituting the consent or request of Railway, express or implied, to any person for the performance of any labor or the furnishing of any materials to the Premises, nor as giving Licensee any right, power or authority to contract for or permit the rendering of any services or the furnishing of any materials

that could give rise to any mechanic's liens or other liens against the Premises. In addition, Licensee shall be liable for all taxes levied or assessed against the Facilities and any other equipment or other property placed by Licensee within the Premises. In the event that any such lien shall attach to the Premises or Licensee shall fail to pay such taxes, then, in addition to any other right or remedy available to Railway, Railway may, but shall not be obligated to, discharge the same. Any amount paid by Railway for any of the aforesaid purposes, together with related court costs, attorneys' fees, fines and penalties, shall be paid by Licensee to Railway within ten (10) days after Railway's demand therefor.

11. Indemnification. Licensee hereby agrees to indemnify and save harmless Railway, its officers, directors, agents and employees, from and against any and all liabilities, claims, losses, damages, expenses (including attorneys' fees) or costs for personal injuries (including death) and property damage to whomsoever or whatsoever occurring (hereinafter collectively, "Losses") that arise in any manner from (a) the presence of the Facilities on or about the Premises, (b) any Operations or any failure to conduct Operations properly, or (c) any act, omission or neglect of Licensee, its agents, servants, employees or contractors in connection therewith, unless caused solely by the negligence of Railway or caused solely by the willful misconduct of Railway.

12. Insurance.

(a) Insurance Requirements. Without limiting in any manner the liability and obligations assumed by Licensee under any other provision of this Agreement, and as additional protection to Railway, Licensee shall comply with the following provisions:

(i) Subject to subsection (ii) below, upon execution of this Agreement, Licensee shall pay Railway a risk financing fee of \$1,900 (the "Risk Financing Fee") to provide Railroad Protective Liability Insurance or such supplemental insurance (which may be self-insurance) as Railway, in its sole discretion, deems to be necessary or appropriate with respect to the initial construction and installation of the Facilities in conjunction with each Operations project on or about the Premises. A separate Risk Financing Fee shall be required each and every time the Premises are entered for a specific project. For purposes of illustration, a project requiring a separate RPL policy could include a one-day property inspection of a multi-month utility relocation. Licensee may submit inquiries about RPL issues at [ns.permitting@railpros.com](mailto:ns.permitting@railpros.com). At the Licensee's option, rather than pay a Risk Financing fee, Licensee shall purchase a commercial Railroad Protective Liability (RPL) insurance policy for Railway as described in (a). In the event that the value of a project exceeds \$350,000, Licensee shall be required to use Option A, below;

(ii) Prior to commencement of **each Operations project** that requires access to **the Premises**, unless Railway elects to make available and Licensee pays the then-current **Risk Financing Fee for a given Operations project**, Licensee shall furnish Railway with an original **Railroad Protective Liability ("RPL") Insurance Policy naming Railway as the named insured and having a limit of (1) not less than a combined single limit of \$2,000,000 each occurrence and \$6,000,000 aggregate, or (2) if the value of a given operations project exceeds \$350,000, not less than a combined single limit of \$5,000,000**

per occurrence and \$10,000,000 in the aggregate. Each RPL policy shall conform to CG 00 34 04 13 or equivalent and include coverage for Terrorism and the Physical Damage to Property Endorsement and shall name Norfolk Southern Corporation and its affiliates and subsidiaries as the insured. Licensee shall ensure that the project location, Licensee identification and work description appear on the declaration pages of a given RPL policy. Licensee shall provide an electronic copy of each RPL policy (and not merely the binder) to Railway at [ns.permitting@railpros.com](mailto:ns.permitting@railpros.com) for review and approval prior to commencing any work on the associated Operations project. Licensee may submit inquiries about RPL issues at [ns.permitting@railpros.com](mailto:ns.permitting@railpros.com).

(iii) Licensee shall maintain a Commercial General Liability (“CGL”) policy containing products and completed operations and contractual liability coverage, with a combined single limit of not less than \$2,000,000 for each occurrence. Any portion of this requirement may be satisfied by a combination of General Liability and/or Excess/Umbrella Liability Coverage. The policy shall not deny any obligation of any insured under the Federal Employer’s Liability Act, as amended. The CGL policy shall provide additional insured coverage equivalent to ISO CG 20 10 11/85.

(iv) Licensee shall maintain Automobile Liability Insurance with a current ISO occurrence form policy (or equivalent) and apply on an “any auto” (Symbol 1) basis, including coverage for all vehicles used in connection with the Work or Services on the leased property, providing annual limits of at least \$1,000,000 per occurrence for bodily injury and property damage combined including uninsured and underinsured motorist coverage, medical payment protection, and loading and unloading.

(v) Licensee shall maintain Workers’ Compensation Insurance to meet fully the requirement of any compensation act, plan or legislative enactment applicable in connection with the death, disability or injury of Licensee’s officers, agents, servants or employees arising directly or indirectly out of the performance of this Agreement;

(vi) Licensee shall maintain Employers’ Liability Insurance with limits of not less than \$1,000,000 each accident \$1,000,000 policy limit for disease, and \$1,000,000 each employee for disease;

(b) General Insurance Requirements. Each insurance policy referred to in subsection (a) above shall also comply with the following requirements:

(i) Additional Insureds. Each insurance policy (excluding any RPL policy and Workers’ Compensation policy) shall name Railway and its parent, subsidiary and affiliated companies as additional insureds with an appropriate endorsement to each policy.

(ii) Licensee’s Coverage Primary and Without Right to Contribution. All policies secured by Licensee, whether primary, excess, umbrella or otherwise, and providing coverage to the Railway as an additional insured (1) are intended to take priority in responding and to pay before any insurance policies Railway may have

secured for itself must respond or pay and (2) may not seek contribution from any policies the Railway may have secured for itself.

(iii) Severability of Interests (Cross Liability). No cross-liability exclusions are permitted that would apply to the additional insureds, and there may not be any restrictions in any policy that limits coverage for a claim brought by an additional insured against a named insured.

(iv) Waiver of Subrogation. To the fullest extent permitted by law, all insurance furnished by Licensee in compliance pursuant to this Agreement shall include a waiver of subrogation in favor of Railway with an appropriate endorsement to each policy.

(v) Notice of Cancellation, Modification or Termination. Each insurance policy shall not be subject to cancellation, termination, modification, changed, or non-renewed except upon thirty (30) days' prior written notice to the additional insureds.

(vi) No Limitation. Each insurance policy shall not limit any of Licensee's indemnity obligations or other liabilities under this Agreement. The insurance available to Railway and its parent, subsidiary and affiliated companies as additional insureds shall not be limited by these requirements should Licensee maintain higher coverage limits.

(vii) Any deductibles or self-insured retentions of Licensee over \$50,000 must be declared and approved by Railway. Approval of such requests shall not be unreasonably withheld.

(viii) Licensee shall require all subcontractors who are not covered by the insurance carried by Licensee to maintain the insurance coverages set forth in subsection (a) above, except for the RPL insurance, including but not limited to additional insured status for Railway and its parent, subsidiary and affiliated companies.

(ix) Licensee shall furnish their memorandum of insurance and the RPL Insurance Policy to Railway's Managing Agent prior to execution of this Agreement at [ns.permitting@railpros.com](mailto:ns.permitting@railpros.com). The insurance coverage required herein shall in no way limit Licensee's liability under this Agreement.

13. Environmental Matters. Licensee assumes all responsibility for any environmental obligations imposed under applicable laws, regulations, ordinances or other requirements of federal, state and local governmental authorities relating to (a) any Operations, including notification and reporting of any releases, and (b) any contamination of any property, water, air or groundwater arising or resulting, in whole or in part, from Licensee's operation or use of the Premises pursuant to this Agreement. In addition, Licensee shall obtain any necessary permits to conduct Operations. Licensee agrees to indemnify and hold harmless Railway from and against any and all fines, penalties, demands or other Losses (including attorneys' fees) incurred by Railway or claimed by any person, company or governmental entity relating to (a) any contamination of any property, water, air or groundwater due to the use or presence of the Facilities on the Premises, (b) Licensee's violation of any laws, regulations or other requirements of federal,

state or local governmental authorities in connection with the use or presence of the Facilities on the Premises or (c) any violation of Licensee's obligations imposed under this Section. Without limitation, this indemnity provision shall extend to any cleanup and investigative costs relating to any contamination of the Premises arising or resulting from, in whole or in part, Licensee's use of the Facilities or any other activities by or on behalf of Licensee occurring on or about the Premises. Licensee further agrees not to dispose of any trash, debris or wastes, including hazardous waste, on the Premises and will not conduct any activities on the Premises which would require a hazardous waste treatment, storage or disposal permit.

14. Assignments and Other Transfers.

(a) Licensee shall not assign, transfer, sell, mortgage, encumber, sublease or otherwise convey (whether voluntarily, involuntarily or by operation of law) this Agreement or any interest therein, nor license, mortgage, encumber or otherwise grant to any other person or entity (whether voluntarily, involuntarily or by operation of law) any right or privilege in or to the Premises (or any interest therein), in whole or in part, without the prior written consent of Railway, which consent may be withheld by Railway in its sole discretion. Any such assignment or other transfer made without Railway's prior written consent shall be null and void and, at Railway's option, shall constitute an immediate default of this Agreement. Notwithstanding the foregoing, upon prior written notice to Railway, Licensee may assign this Agreement to a parent, a wholly-owned subsidiary of Licensee or a wholly-owned subsidiary of Licensee's parent without Railway's consent; provided, however, that no such assignment shall relieve Licensee of its obligations under this Agreement.

(b) Railway shall have the right to transfer and assign, in whole or in part, all its rights and obligations hereunder and in or to the Premises. From and after the effective date of any such assignment or transfer, Railway shall be released from any further obligations hereunder; and Licensee shall look solely to such successor-in-interest of Railway for the performance of the obligations of "Railway" hereunder.

15. Meaning of "Railway". The word "Railway" as used herein shall include any other company whose property at the aforesaid location may be leased or operated by Railway. Said term also shall include Railway's officers, directors, agents and employees, and any parent company, subsidiary or affiliate of Railway and their respective officers, directors, agents and employees.

16. Default: Remedies.

(a) The following events shall be deemed to be events of default by Licensee under this Agreement:

(i) Licensee shall fail to pay the Fee or any other sum of money due hereunder and such failure shall continue for a period of ten (10) days after the due date thereof;

(ii) Licensee shall fail to comply with any provision of this Agreement not requiring the payment of money, all of which terms, provisions and covenants shall be

deemed material, and such failure shall continue for a period of thirty (30) days after written notice of such default is delivered to Licensee;

(iii) Licensee shall become insolvent or unable to pay its debts as they become due, or Licensee notifies Railway that it anticipates either condition;

(iv) Licensee takes any action to, or notifies Railway that Licensee intends to file a petition under any section or chapter of the United States Bankruptcy Code, as amended from time to time, or under any similar law or statute of the United States or any State thereof; or a petition shall be filed against Licensee under any such statute; or

(v) A receiver or trustee shall be appointed for Licensee's license interest hereunder or for all or a substantial part of the assets of Licensee, and such receiver or trustee is not dismissed within sixty (60) days of the appointment.

(b) Upon the occurrence of any event or events of default by Licensee, whether enumerated in this Section or not, Railway shall have the option to pursue any remedies available to it at law or in equity without any additional notices to Licensee. Railway's remedies shall include, but not be limited to, the following: (i) termination of this Agreement, in which event Licensee shall immediately surrender the Premises to Railway; (ii) entry into or upon the Premises to do whatever Licensee is obligated to do under the terms of this License, in which event Licensee shall reimburse Railway on demand for any expenses which Railway may incur in effecting compliance with Licensee's obligations under this License, but without rendering Railway liable for any damages resulting to Licensee or the Facilities from such action; and (iii) pursuit of all other remedies available to Railway at law or in equity, including, without limitation, injunctive relief of all varieties.

17. Railway Termination Right. Notwithstanding anything to the contrary in this Agreement, Railway shall have the right to terminate this Agreement and the rights granted hereunder, after delivering to Licensee written notice of such termination no less than sixty (60) days prior to the effective date thereof, upon the occurrence of any one or more of the following events:

(a) If Licensee shall fail to install the Facilities within one (1) year from the date of the Agreement, or if Licensee shall discontinue the use or operations of the Facilities for one (1) year; or

(b) If Railway shall be required by any governmental authority having jurisdiction over the Premises to remove, relocate, reconstruct or discontinue operation of its railroad on or about the Premises; or

(c) If Railway, in the good faith judgment of its Superintendent, shall require a change in the location or elevation of its railroad on or about the location of the Facilities or the Premises that might effectively prohibit the use or operation of the Facilities; or

(d) If Railway, in the good faith judgment of its Superintendent, determines that one or more aspects of Operations unduly interfere with the operation and maintenance of the facilities of Railway, or with the present or future use of such property by Railway, its lessees, affiliates, successors or assigns, for their respective purposes.

18. Condemnation. If the Premises or any portion thereof shall be taken or condemned in whole or in part for public purposes, or sold in lieu of condemnation, then this Agreement and the rights granted to Licensee hereunder shall, at the sole option of Railway, forthwith cease and terminate. All compensation awarded for any taking (or sale proceeds in lieu thereof) shall be the property of Railway, and Licensee shall have no claim thereto, the same being hereby expressly waived by Licensee.

19. Removal of Facilities; Survival. The Facilities are and shall remain the personal property of Licensee. Upon the expiration or termination of this Agreement, Licensee shall remove the Facilities from the Premises within thirty (30) days after the effective date thereof. In performing such removal, unless otherwise directed by Railway, Licensee shall restore the Premises to the same condition as existed prior to the installation or placement of Facilities, reasonable wear and tear excepted. In the event Licensee shall fail to so remove the Facilities or restore the Premises, the Facilities shall be deemed to have been abandoned by Licensee, and the same shall become the property of Railway for Railway to use, remove, destroy or otherwise dispose of at its discretion and without responsibility for accounting to Licensee therefor; provided, however, in the event Railway elects to remove the Facilities, Railway, in addition to any other legal remedy it may have, shall have the right to recover from Licensee all costs incurred in connection with such removal and the restoration of the Premises. Notwithstanding anything to the contrary contained in this Agreement, the expiration or termination of this Agreement, whether by lapse of time or otherwise, shall not relieve Licensee from Licensee's obligations accruing prior to the expiration or termination date, and such obligations shall survive any such expiration or other termination of this Agreement.

20. Entire Agreement. This Agreement contains the entire agreement of Railway and Licensee and supersedes any prior understanding or agreement between Railway and Licensee respecting the subject matter hereof, and no representations, warranties, inducements, promises or agreements, oral or otherwise, between the parties not embodied in this Agreement shall be of any force or effect.

21. Attorneys' Fees. If Railway should bring any action under this Agreement or consult or place the Agreement or any amount payable by Licensee hereunder, with an attorney concerning or for the enforcement of any of Railway's rights hereunder, then Licensee agrees in each and any such case to pay to Railway all costs, including but not limited to court costs and attorneys' fees, incurred in connection therewith.

22. Severability. If any clause or provision of this Agreement is illegal, invalid or unenforceable under present or future laws effective during the Term, then and in that event, it is the intention of the parties hereto that the remainder of this Agreement shall not be affected thereby; and it is also the intention of the parties to this Agreement that in lieu of each clause or provision of this Agreement that is illegal, invalid or unenforceable, there be added as a part of

this Agreement a clause or provision as similar in terms to such illegal, invalid or unenforceable clause or provision as may be possible and be legal, valid and enforceable.

23. Modifications; Waiver; Successors and Assigns. This Agreement may not be altered, changed or amended, except by instrument in writing signed by both parties hereto. No provision of this Agreement shall be deemed to have been waived by Railway unless such waiver shall be in a writing signed by Railway and addressed to Licensee, nor shall any custom or practice that may evolve between the parties in the administration of the terms hereof be construed to waive or lessen the right of Railway to insist upon the performance by Licensee in strict accordance with the terms hereof. The terms and conditions contained in this Agreement shall apply to, inure to the benefit of, and be binding upon the parties hereto, and upon their respective successors in interest and legal representatives, except as otherwise herein expressly provided. If there shall be more than one Licensee, the obligations hereunder imposed upon Licensee shall be joint and several.

24. Notice. Any and all other notices, demands or requests by or from Railway to Licensee, or Licensee to Railway, shall be in writing and shall be sent by (a) postage paid, certified mail, return receipt requested, or (b) a reputable national overnight courier service with receipt therefor, or (c) personal delivery, and addressed in each case as follows:

If to Railway:

c/o Norfolk Southern Corporation  
1200 Peachtree Street, NE - 12<sup>th</sup> Floor  
Atlanta, Georgia 30309-3504  
Attention: Director Real Estate

If to Licensee:

CITY OF SMITHERS SANITARY BOARD  
PO Box 489  
Smithers, West Virginia 25186  
Attention: City ff Smithers

Either party may, by notice in writing, direct that future notices or demands be sent to a different address. All notices hereunder shall be deemed given upon receipt (or, if rejected, upon rejection).

25. Miscellaneous. Time is of the essence with regard to each provision of this Agreement. This Agreement shall be construed and interpreted in accordance with and governed by the laws of the State in which the Premises are located. Each covenant of Railway and Licensee under this Agreement is independent of each other covenant under this Agreement. No default in performance of any covenant by a party shall excuse the other party from the performance of any other covenant. The provisions of this Agreement that, by their nature, are intended to survive the expiration or earlier termination of this Agreement, including Sections 8, 10, 11, 13 and 19, shall so survive.

26. Limitations of Grant. Licensee acknowledges that the license granted hereunder is a quitclaim grant, made without covenants, representations or warranties with respect to Railway's (a) right to make the grant, (b) title in the Premises, or (c) right to use or make available to others the Premises for the purposes contemplated herein. Railway is the owner and/or holder of the Premises subject to the terms and limitations under which it is owned or held, including without limitation conditions, covenants, restrictions, easements (including any pre-existing fiber optic



easements or licenses), encroachments, leases, licenses, permits, mortgages, indentures, reversionary interests, fee interests, zoning restrictions and other burdens and limitations, of record and not of record, and to rights of tenants and licensees in possession, and Licensee agrees that the rights licensed hereunder are subject and subordinate to each and all of the foregoing. Licensee accepts this grant knowing that others may claim that Railway has no right to make it, and Licensee agrees to release, hold harmless and indemnify (and, at Railway's election, defend, at Licensee's sole expense, with counsel approved by Railway) Railway, its affiliated companies, and its and their respective officers, directors, agents and employees, from and against any detriments to, or liabilities of, any type or nature arising from such claims, including punitive damages and any forfeitures declared or occurring as a result of this grant.

27. Limitations Upon Damages. Notwithstanding any other provision of this Agreement, Railway shall not be liable for breach of this Agreement or under this Agreement for any consequential, incidental, exemplary, punitive, special, business damages or lost profits, as well as any claims for death, personal injury, and property loss and damage which occurs by reason of, or arises out of, or is incidental to the interruption in or usage of the Facilities placed upon or about the Premises by Licensee, including without limitation any damages under such claims that might be considered consequential, incidental, exemplary, punitive, special, business damages or lost profits. It is understood and agreed by Licensee that Railway cannot and will not make any warranties, representations or guarantees that Licensee's communication system (if any), as located on Railway's property, will not be interrupted.

**IN WITNESS WHEREOF**, the parties hereto have executed this Agreement in duplicate, each part being an original, as of the date first above written.

Witness:

DocuSigned by:  
*Kayana Hollaway*  
853F8C948034405

As to Railway

**NORFOLK SOUTHERN RAILWAY  
COMPANY**

DocuSigned by:  
*Adam J...*  
ECFF11FBD73C464...

By: \_\_\_\_\_  
Real Estate Manager

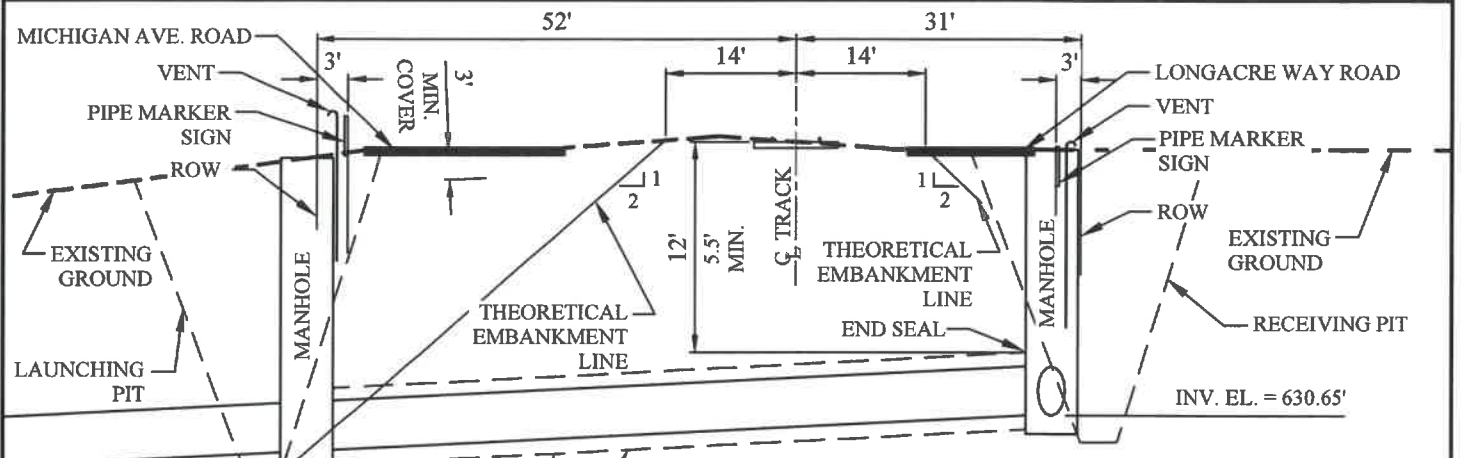
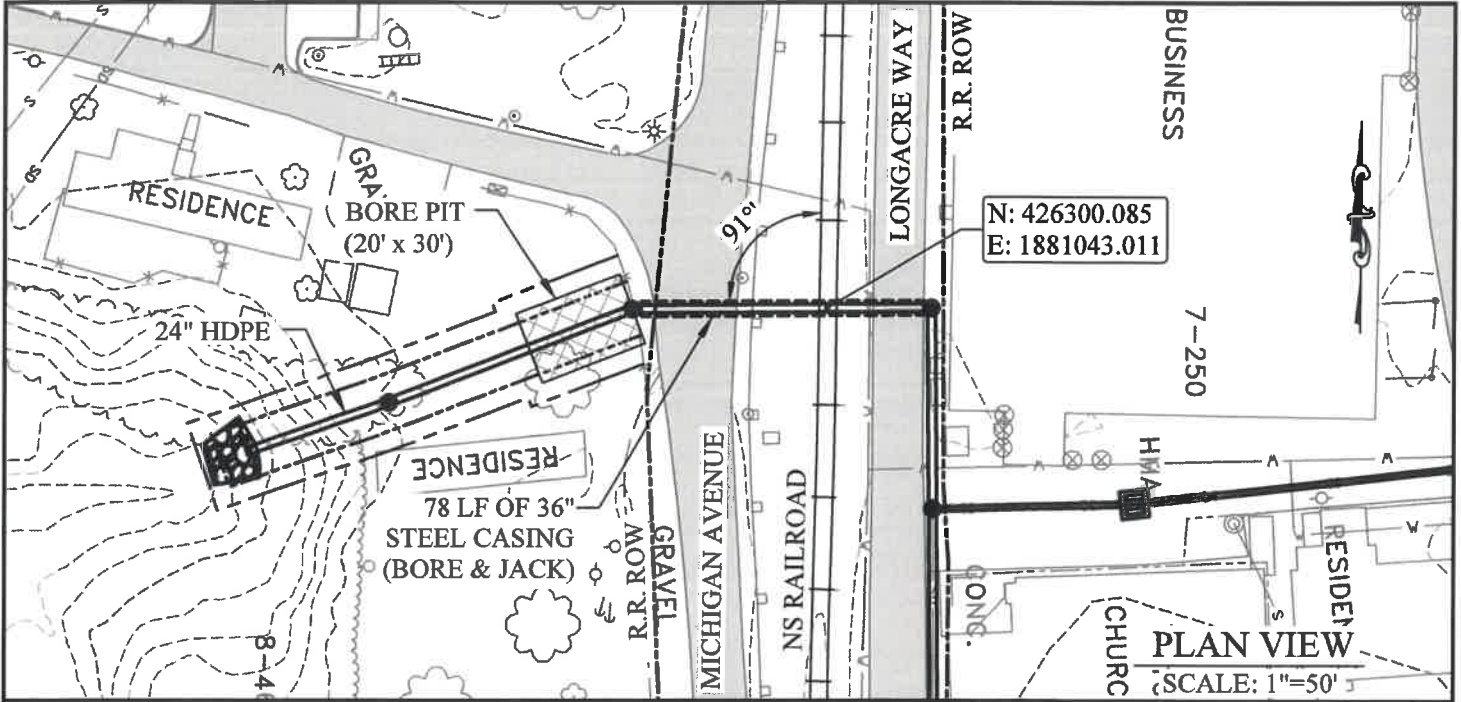
Witness:

As to Licensee

**CITY OF SMITHERS SANITARY  
BOARD**

DocuSigned by:  
*Anne Cavalier (Party to be Invoiced)*  
0E3FB58E5DE0487...

By: \_\_\_\_\_  
Title: Chair, Smithers Sanitary Board



**General Notes**

All plans shall include the following General Notes:  
 Contractor shall follow all requirements of Norfolk Southern's NSCE-8 Specifications.  
 Pipeline and Crossing to be installed and maintain in accordance with last approved AMERICAN RAILWAY ENGINEERING AND MAINTENANCE OF WAY ASSOCIATION Specifications for Pipelines Conveying Flammable and Non-flammable Substance.  
 Blasting Not Permitted.

VAL. MAP V-308-W.V./46

**PROFILE VIEW**

SCALE: HORZ. 1"=20'  
 VERT. 1"=10'

Contents to be handled  
 Outside diameter  
 Pipe material  
 Specifications and Grade  
 Wall thickness  
 Actual working pressure  
 Type of joint  
 Coating  
 Method of installation  
 Vents: No. N/A Size \_\_\_\_\_ Hgt. above ground \_\_\_\_\_  
 Seal: Both ends GROUT  
 Bury: Base of rail to top of casing 12 ft. 0 in.  
 Bury: (Not beneath tracks) 4 ft. 6 in.  
 Bury: (Roadway ditches) 4 ft. 0 in.  
 Cathodic protection: NONE  
 Type, size and spacing of insulators or supports SEE ATTACHMENT

Carrier Pipe	Casing Pipe
<u>STORM</u>	<u>CARRIER PIPE</u>
<u>24"</u>	<u>36"</u>
<u>HDPE</u>	<u>STEEL</u>
<u>DR 17</u>	<u>GRADE B</u>
<u>1.41"</u>	<u>0.75"</u>
<u>N/A</u>	<u>N/A</u>
<u>NONE</u>	<u>NONE</u>

SLIDE THROUGH BORE & JACK

	One end
Bury: Base of rail to top of casing	<u>12</u> ft. <u>0</u> in.
Bury: (Not beneath tracks)	<u>4</u> ft. <u>6</u> in.
Bury: (Roadway ditches)	<u>4</u> ft. <u>0</u> in.

**EXHIBIT A**

NORFOLK SOUTHERN RAILWAY COMPANY  
 Accompanying Agreement With  
 CITY OF SMITHERS SANITARY BOARD  
 Activity No.: 1285520 E.S.: 17823+39  
 Division: Blue Ridge Mile Post: WV-212.81  
 Val. Sec: 308 Map No. 46  
 City: Smithers County: Fayette, State: WV  
 Lat: 38.1693688 Long: -81.3042171



OPERATING COMPANY

NS PIPE AND WIRE ADMINISTRATOR  
 PHILADELPHIA, PA

SMITHERS, WEST VIRGINIA  
 SMITHERS SANITARY BOARD  
 1,296' TO MILE POST NA-154



000000 (2)

**SPECIFICATIONS**

**FOR**

**PIPELINE OCCUPANCY**

**OF**

**NORFOLK SOUTHERN CORPORATION**

**PROPERTY**

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## Specifications for Pipeline Occupancy of Norfolk Southern Property

### 1.0 GENERAL

#### 1.1 Scope

- A. This specification shall apply to the design and construction of pipelines carrying flammable or non-flammable substances. This specification shall also apply to tracks owned by others (sidings, industry tracks, etc.) over which NS operates its equipment.
- B. It is to be clearly understood that NS owns its right-of-way for the primary purpose of operating a railroad. All occupancies shall therefore be designed and constructed so that rail operations and facilities are not interfered with, interrupted or endangered. In addition, the proposed facility shall be located to minimize encumbrance to the right-of-way so that the railroad will have unrestricted use of its property for current and future operations.

#### 1.2 Definitions

- A. NS - Norfolk Southern Corporation
- B. Applicant - Individual, corporation or municipality desiring occupancy of NS property
- C. Professional Engineer - Engineer licensed in the state where the facilities are to be constructed
- D. Carrier Pipe - Pipe used to transport the product
- E. Casing Pipe - Pipe through which the carrier pipe is installed
- F. Sidings or industry tracks - Tracks located off NS's right-of-way, serving an industry

#### 1.3 Application for Occupancy

- A. Individuals, corporations, or municipalities desiring occupancy of NS property by pipeline occupations must agree, upon approval of the engineering and construction details by NS, to execute an appropriate NS occupational license and pay any required fees and/or rentals specified therein.
- B. The application process and guidelines for a pipeline crossing occupancy can be found at [www.nscorp.com](http://www.nscorp.com), then follow links for "Customers", "Real Estate", "Wireline/Pipeline and Fiber Optics"
- C. All applications shall be submitted through the web based application portal at <https://ns.railprosperring.com> with a PDF copy of all design and construction plans, and a PDF copy of all specifications and engineering computations for the proposed occupancy. On extensive projects, only those plans involving work on, or affecting NS property and operations, shall be submitted. Included shall be a plan showing the extent of the total project upon which that portion of the work affecting NS is clearly defined.
- D. All of the above plans, specifications and computations must be prepared by and bear the seal of a Professional Engineer licensed in the state the project is located.

#### 1.4 Right of Entry

- A. No entry upon NS property for the purpose of conducting surveys, field inspections, obtaining soils information or any other purposes associated with the design and construction for the proposed occupancy, will be permitted without a proper entry permit prepared by NS. The applicant must pay the associated fees and execute the entry permit.
- B. It is to be clearly understood that the issuance of an entry permit does not constitute authority to proceed with any construction. Construction cannot begin until a formal agreement is executed by NS and the applicant receives permission to proceed with the work, from the designated construction monitoring agency of NS.
- C. The application for a Right of Entry permit shall be obtained at [www.nscorp.com](http://www.nscorp.com), then follow links for Real Estate > NS Services > Access NS Property.

#### 1.5 Site Inspection

- A. For longitudinal occupancy of NS property, a site inspection along the proposed pipeline route may be required before final design plans are prepared. When a site inspection is required, the applicant and/or his engineer must meet with representatives of NS to view the entire length of the proposed occupancy.
- B. Prior to the site inspection the applicant must submit the following information through the application portal:
  - (1) A plan view of the proposed route showing all tracks, both NS right-of-way lines and all other facilities located on the right-of-way. The distance from the proposed pipeline to the adjacent track and to the right-of-way lines must be shown.
  - (2) A complete "Pipe Data Sheet" (See Plate I)
  - (3) Typical cross sections along the proposed route. (See Plate V)
- C. Site inspections for pipe crossings are not required unless, in the opinion of NS, the size and location of the facility warrant an inspection.

#### 1.6 Information Required for Submission

##### 1.6.1 Plans and Computations

- A. Plans for proposed pipeline occupancies shall be submitted to and approved by NS prior to NS issuance of an agreement and start of construction.
- B. **Plans are to be prepared in 11" x 17" size and submitted in a PDF format. Failure of the applicant to comply with these requirements may be sufficient cause for rejection of the application.**
- C. Plans shall be drawn to scale, dimensioned with US Customary Units, and shall include the following (See Plates I to IX):
  - (1) Plan view of proposed pipeline in relation to all NS facilities and facilities immediately adjacent to



NS including, but not limited to, tracks, buildings, signals, pole lines, other utilities and all other facilities that may affect or influence the pipeline design and construction. (See Plate II)

- (2) The location, in feet, of the pipe crossing from the nearest centerline of an NS bridge, giving the NS bridge number. If the above is not available, provide distance to the nearest highway grade crossing of the railroad and the DOT number posted at the highway grade crossing, if available.
- (3) In all cases, the name of the State and County in which the proposed facilities are located must be shown. In States where Townships, Ranges and Sections are used, show the distance in feet to the nearest Section line and identify the Section number, Township and Range.
- (4) The profile of the ground above the centerline of the pipe, from field survey, showing relationship of the pipeline and/or casing pipe to the ground levels, the tracks and other facilities, (See Plate III). For longitudinal occupations, the top of rail profile of the adjacent track shall be shown on the pipeline profile, (see Plate IV).
- (5) All NS property lines indicated by dimensions, in feet, to the centerline of adjacent track, as well as the overall width of the NS right-of-way. If the pipeline is in a public highway, the limits of the dedicated highway right-of-way, as well as the limits of any paving, sidewalks etc., shall be defined, by dimensions in feet, from the centerline of the dedicated right-of-way,
- (6) The angle of the crossing in relation to the centerline of the tracks(s). (See Plate II)
- (7) On pipelines having valves, the distance in feet along the pipeline from the crossing to the nearest valves and/or control stations.
- (8) A separate "Pipe Data Sheet" (See Plate I) shall be submitted on an 8 ½" x 11" sheet, for each crossing.

**D.** The plan shall be specific, on NS property and under tracks that are not on NS property, as to the:

- (1) Method of installation. (See Section 5.1)
- (2) Size and material of the casing pipe. (See Section 4.3)
- (3) Size and material of the carrier pipe. (See Section 4.4)

These items **cannot** have an alternative and any application that is received that indicates options in any of the above items **will not be processed.**

**E.** Once the application has been approved by NS, no variance from the plans, specifications, method of installation, construction, etc., as approved in the occupancy document, will be considered or permitted without the payment to NS of additional fees for the re-processing of the application.

**F.** All plans and computations associated with the work under the agreement shall be prepared by, and bear the seal of, a licensed Professional Engineer in the state where the work will take place. If not so imprinted, the application will be given no further consideration. This requirement also applies to all data submitted by the applicant's contractor. Contractor's plans and computations that are not stamped will be returned and construction will not be permitted to proceed.

### 1.6.2 Specifications

- A. Project specifications, for all work on and affecting the NS right-of-way, shall be included with the submission. All pertinent requirements of this document shall be included.

### 1.7 Notification to Proceed with Construction

- A. After approval of the engineering plans and specifications and execution of the occupational agreement, the applicant will be notified of the appropriate NS representative that must be contacted prior to start of construction. The NS representative will coordinate all other construction aspects of the project that relate to NS, including but not limited to, construction monitoring, flagging, track work, and protection of signal cables.

## 2.0 GENERAL REQUIREMENTS

### 2.1 Use of a Casing Pipe

- A. A casing pipe will be required for all pipeline crossings carrying liquid flammable or non-flammable substances under pressure.
- B. For flammable and nonflammable gas pipelines the casing pipe may be omitted provided the carrier pipe meets the requirements provided in the AREMA Manual Chapter 1, Part 5, Section 5.2.3. NS may require use of a casing pipe at locations where increased risks from specific site conditions (track speed, traffic density, etc.) are present.
- C. Pressure pipelines that do not cross under the track but are located within 30 feet of the centerline of any track or closer than 45 feet to nearest point of any bridge, building or other important structure, shall be encased.
- D. The casing pipe shall be laid across the entire width of the right-of-way, except where a greater length is required to comply with Section 4.3.1.F. of this specification, even though such extension is beyond the right-of-way. For non-pressure sewer or drainage crossing, where a casing is used for carrier pipe installation purposes only, the casing need only to extend from the boring pit to the receiving pit.

### 2.2 Location of Pipeline on the Right-of-Way

- A. Pipelines laid longitudinally on NS right-of-way shall be located as far as practicable from any tracks or other important structures and as close to the railroad property line as possible. Longitudinal pipelines must not be located in earth embankments or within ditches located on the right-of-way.
- B. Pipelines shall be located, where practicable, to cross tracks at approximate right angles to the track, but preferably at not less than 45 degrees.
- C. Pipelines shall not be placed within a culvert, under railroad bridges, nor closer than 50 feet to any portion of any railroad bridge, building, or other important structure, except in special cases, and then by special design, as approved by NS Engineering.
- D. Pipelines shall not be located within 50 feet of a turnout (switch) when crossing the track. The limits of the turnout extend from the point of the switch to the last long timber.
- E. Pipeline shall not be located within 50 feet of a control point area. The limits of the control point area are governed by the signal system regulating the control point.

- F. Pipeline installations shall not be designed as an open cut installation where the pipeline is to be located within the limits of a grade crossing. If it is shown that no other method of installation is possible, the applicant will be responsible for reimbursing NS for all costs associated with the removal and reconstruction of the grade crossing.
- G. Pipelines carrying liquefied petroleum gas shall, where practicable, cross the railroad where tracks are carried on embankment.
- H. Longitudinal uncased gas pipelines must not be located within 30 feet of any track.

## 2.3 Depth of Installation

### 2.3.1 Pipelines Conveying Non-Flammable Substances

- A. Casing/carrier pipes placed under NS track(s) shall be not less than 5 ½ feet from base of rail to top of pipe at its closest point, except that under sidings or industry tracks this distance may be 4 ½ feet as approved by NS. On other portions of the right-of-way, where the pipe is not directly beneath any track, the depth from ground surface will be 4 feet or from bottom of ditch to top of pipe shall not be less than 3 feet.
- B. Pipelines laid longitudinally on NS right-of-way, 50 feet or less from centerline track, shall be buried not less than 4 feet from ground surface to top of pipe. Where the pipeline is laid more than 50 feet from centerline of track, the minimum cover shall be at least 3 feet.

### 2.3.2 Pipelines Conveying Flammable Substances

- A. Casing pipes under NS track(s) shall be not less than 5 ½ feet from base of rail to top of pipe at its closest point, except that under sidings or industry tracks this distance may be 4 ½ feet as approved by NS. On other portions of the right-of-way, where the pipe is not directly beneath any track, the depth from ground surface will be 4 feet or from bottom of ditch to top of pipe shall not be less than 3 feet.
- B. Uncased gas pipelines, under NS track(s), shall not be less than 10 feet from the base of rail to the top of the pipe at its closest point. At all other locations where crossing the right-of-way, the minimum ground cover must be 6 feet. Where it is not possible to obtain the above depths, use of a casing pipe will be required.
- C. Pipelines laid longitudinally on NS's right-of-way, 50 feet or less from centerline track, shall be buried not less than 6 feet from ground surface to top of pipe. Where the pipeline is laid more than 50 feet from centerline of track, the minimum cover shall be at least 5 feet.

## 2.4 Pipelines Within Limits of a Dedicated Highway

- A. Pipelines within the limits of a dedicated highway are subject to all the requirements of this specification and must be designed and installed in accordance with them.
- B. The limits of the dedicated highway (right-of-way) must be clearly shown on the plans.
- C. Construction cannot begin until an agreement has been executed between NS and the applicant and proper notification has been given to NS's authorized representative. (See Section 1.7)
- D. Pipelines shall maintain a minimum horizontal clearance of 4-feet, or if within 4-feet, a minimum vertical clearance of 10-feet from the base of any railroad signal apparatus.

## **2.5 Modification of Existing Facilities**

- A. Any replacement or modification of an existing carrier pipe and/or casing shall be considered as anew installation, subject to the requirements of this specification.

## **2.6 Abandoned Facilities**

- A. The owner of all abandoned pipe crossings and other occupancies shall notify NS in writing of the intention to abandon. The owner of pipe crossings and other occupancies shall submit to NS a request to abandon through the application portal and shall include its abandonment plans.
- B. Abandoned pipelines shall be removed or completely filled with cement grout, compacted sand or other methods as approved by NS.
- C. Abandoned manholes and other structures shall be removed to a minimum distance of 3 feet below finished grade and completely filled with cement grout or compacted sand.

## **2.7 Conflict of Specifications**

- A. Where laws or orders of public authority prescribe a higher degree of protection than specified herein, then the higher degree so prescribed shall be deemed a part of this specification.

## **2.8 Insulation**

- A. Pipelines and casings shall be suitably insulated from underground conduits carrying electric wires on NS property.

## **2.9 Corrosion Protection and Petroleum Leak Prevention**

- A. Pipelines on NS property that carry petroleum products or hazardous liquids shall be designed in accordance with current federal, state and/or local regulations that mandate leak detection automatic shutoff, leak monitoring, and sacrificial anodes and/or exterior coatings to minimize corrosion and prevent petroleum releases.

## **3.0 SOIL INVESTIGATION**

### **3.1 General**

- A. Test borings or other soil investigations approved by NS shall be made to determine the nature of the underlying material for all pipe crossings 60 inches in diameter and larger under track(s). (See section 1.4 relative to procedures)
- B. Test borings or other soil investigations, approved by NS, may be required when, in the judgement of NS, they are necessary to determine the adequacy of the design and construction of pipe crossings less than 60 inches in diameter and for other facilities located on the right-of-way.

### **3.2 Location**

- A. Borings shall be made on each side of the track(s), on the centerline of the pipe crossing, and as close to the track(s) as practicable. (See Section 1.4 relative to procedures)

- B. Test boring logs shall be accompanied with a plan, drawn to scale, showing the location of the borings in relation to the track(s) and the proposed pipe.

### 3.3 Sampling

- A. Test borings shall be conducted by a qualified firm using current methods approved by ASTM for soil sampling. Boring logs and soil data shall be accompanied by an analysis of the pertinent soil characteristics and their impact on the project as it relates to the railway by a certified Geologist or licensed Professional Engineer

### 3.4 Boring Logs

- A. Test boring logs shall clearly indicate all of the following:
  - (1) Boring number as shown on the required boring location plan.
  - (2) Ground elevation at each boring using same datum as the pipeline construction plans.
  - (3) Engineering description of soils or rock encountered.
  - (4) Depth and percent recovery of all soil samples.
  - (5) Depth from surface for each change in strata.
  - (6) Blows for each 6 inches (152mm) of penetration for the standard penetration test described in ASTM D 1586. Blows for lesser penetrations should be recorded.
  - (7) Percent recovery and Rock Quality Designation (RQD) for all rock cores.
  - (8) Depth to ground water while sampling and when it has stabilized in the bore hole.
- B. The location of the carrier pipe and/or casing pipe shall be superimposed on the boring logs before submission to NS.
- C. All borings shall be sealed, for their full depth, with a 4-3-1 bentonite-cement-sand grout after accurate ground water readings have been taken and recorded.
- D. Soil samples taken from auger vanes or return wash water are not acceptable.

### 3.5 Additional Information

- A. When directed by NS, additional borings may be required for the purpose of taking undisturbed thin-wall piston samples or Dennison type samples for laboratory testing to determine the index and engineering properties of certain soil strata.
- B. The geotechnical report shall assess the risk of frac-out. Information required to evaluate such a risk includes but not limited to the following:
  - (1) Maximum allowable fluid pressure
  - (2) Minimum depth of bore
  - (3) Expected drilling fluid pressure
  - (4) Pressure exerted by overburden
  - (5) Potential for type of soil to have fissures

**4.0 DESIGN REQUIREMENTS**

**4.1 Design Loads**

**4.1.1 General Requirements**

- A. All pipes, manholes and other facilities shall be designed for the external and internal loads to which they will be subjected.
- B. To allow for placement of additional track(s) or shifting of the existing track(s), all proposed pipelines or structures shall be designed as if a railroad loading is directly above the facility.

**4.1.2 Earth Load**

- A. The dead load of the earth shall be considered as 120 pounds per cubic foot unless soil conditions warrant the use of a higher value.

**4.1.3 Railroad Load (Live Load Impact)**

- A. The railroad live load used shall be a Cooper E-80 loading. This loading consists of 80-kip axle loads spaced 5 feet on centers.
- B. An impact factor of 1.75 (multiply live load by the impact factor) shall be used for depth of cover up to 5 feet. Between 5 and 30 feet, the impact factor is reduced by 0.03 per foot of depth. Below a depth of 30 feet, the impact factor is one.
- C. The values shown in Table shall be used for the vertical pressure on a buried structure for the various heights of cover.

**Table 1**

Live loads, including impact, for various heights of cover for a Cooper E-80 loading.

Height of Cover	Load
Feet	lb/sq ft
2	3800
3	3150
4	2850
5	2550
6	2250
7	1950
8	1700
9	1500
10	1300
12	1000
14	800
16	625
18	500
20	400
25	250
30	150

- D. To determine the horizontal pressure caused by the railroad loading on a sheet pile wall or other structure adjacent to the track, the Boussinesq analysis shall be used. The load on the track shall be taken as a strip load with a width equal to the length of the ties, 8 ½ feet. The vertical surcharge, q (psf), caused by each axle, shall be uniform and equal to the axle load divided by the tie length and the axle spacing, 5 feet. For the E-80 loading results in;

$$Q = 80,000 / (8.5 \times 5) = 1882 \text{ psf.} \quad (q = 356 / (2.591 \times 1.524) = 90.1 \text{ kPa})$$

The horizontal pressure due the live load surcharge at any point on the wall or other structure is  $p_h$  and can be calculated by the following:

$$p_h = (2q/\pi) (\beta - \sin \beta (\cos 2\alpha)) \quad (\text{See PLATE IX})$$

- E. The vertical and horizontal pressures given above shall be used unless an alternate design method is approved by NS. Proposals to use an alternate design method must include acceptable references and a statement explaining the justification for choosing the alternate method.

## 4.2 Design Assumptions

- A. To design a casing pipe or an uncased carrier pipe for the external loads on NS's right-of-way, the following design assumptions shall be used, unless site conditions indicate more conservative values are required:

### B. Flexible Pipe (Steel, DIP, CMP, Tunnel Liner Plate)

#### (1) Steel Pipe (Bored and jacked in place)

- Spangler's Iowa formula shall be used for design with:
  - (a) Deflection lag factor -  $D_s = 1.5$
  - (b) Modulus of soil reaction -  $E' = 1080 \text{ psi}$
  - (c) Bedding constant -  $K_b = 0.096$
  - (d) Soil loading constant -  $K_{u'} = 0.13$
  - (e) Allowable deflection of pipe - 3% of pipe diameter

#### (2) Ductile Iron Pipe (Open Cut)

- ANSI Specification A 21.50 shall be used for design with:
  - (a) Pipe laying condition = type 3 (see Sec. 5.1.2 for backfill requirements on RR R/W)
  - (b) Earth load – ANSI A 51.50 prism method

#### (3) Corrugated Steel Pipe & Corrugated Structural Steel Plate Pipe (Open Cut)

- AREMA Chapter 1, Part 4, Sections 4.9 & 4.10 shall be used for design with:
  - (a) Soil stiffness factor -  $K = 0.33$
  - (b) Railroad impact as per Section 4.1.3b. of this specification

#### (4) Tunnel Liner Plate (Tunneled)

- AREMA
  - (a) Soil stiffness factor -  $K = 0.33$
  - (c) Railroad impact as per Section 4.1.3.b. of this specification.

## 4.3 Casing Pipe

### 4.3.1 General Requirements

- A. Casing pipe shall be so constructed as to prevent leakage of any substance from the casing throughout its length, except at ends of casing where ends are left open, or through vent pipes when ends of casing are sealed. Casing shall be installed so as to prevent the formation of a waterway under the railroad, and with an even bearing throughout its length, and shall slope to one end (except for longitudinal occupancy).
- B. The casing pipe and joints shall be of steel and of leakproof construction when the pipeline is carrying liquid flammable products or highly volatile substances under pressure.
- C. The inside diameter of the casing pipe shall be such as to allow the carrier pipe to be removed subsequently without disturbing the casing or the roadbed. For steel pipe casings, the inside diameter of the casing pipe shall be at least 2 inches greater than the largest outside diameter of the carrier pipe joints or couplings, for carrier pipe less than 6 inches in diameter; at least 4 inches greater for carrier pipe 6 inches and over in diameter.
- D. A maximum vertical deflection of the casing pipe of 3 percent of its diameter, plus ½ inch clearance shall be provided so that no loads from the roadbed, track, traffic or casing pipe itself are transmitted to the carrier pipe. When insulators are used on the carrier pipe, the inside diameter of the flexible casing pipe shall be at least 2 inches greater than the outside diameter of the carrier pipe for pipe less than 8 inches in diameter; at least 3 ¼ inches greater for pipe 8 inches to 16 inches, inclusive, in diameter and at least 4 ½ inches greater for pipe 18 inches and over in diameter.
- E. The casing pipe diameter shall not be larger than is necessary to permit the insertion of the carrier pipe.
- F. Casing pipe under railroad tracks and across NS's right-of-way shall extend the **greater** of the following distances, measured at right angle to centerline of track:
  - (1) Across the entire width of the NS right-of-way
  - (2) 3 feet beyond ditch line
  - (3) 2 feet beyond toe of slope
  - (4) A minimum distance of 30 feet from each side of centerline of outside track when casing is sealed at both ends.
  - (5) A minimum distance of 45 feet from centerline of outside track when casing is open at both ends.
  - (6) Beyond theoretical railroad embankment line. This line begins at a point, on existing grade, 14 feet horizontally from centerline track and extends downward on a 2 (H) to 1 (V) slope. (See Plate III)  
The 14 feet is measured from 19 inches below the base of the rail.
- G. If additional tracks are constructed in the future, the casing shall be extended correspondingly at the applicant's expense.

### 4.3.2 Steel Pipe

- A. Steel pipe may be installed by open cut, boring or jacking.
- B. Steel pipe shall have a specified minimum yield strength, SMYS, of at least 35,000 psi . The ASTM or API specification and grade for the pipe are to be shown on the Pipe Data Sheet (Plate I).
- C. Joints between the sections of pipe shall be fully welded around the complete circumference of the pipe.



- D. In situations where the applicant can demonstrate a situational need, interlocked joints (commonly known as “Permalok” joints) may be considered in place of fully welded joints. Submissions shall include an engineering analysis of the suitability of the proposed interlocked joint for railroad loading and jacking stresses in the given soil.
- E. Steel casing pipe, with a minimum cover of 5 ½ ft., shall have a **minimum** wall thickness as shown in Table 2, unless computations indicate that a thicker wall is required.

**Table 2**

Pipe Diameter	Cathodically Protected	Uncoated and Unprotected
Nominal Pipe Size	Nominal Wall Thickness	Nominal Wall Thickness
Inches	Inches	Inches
10 and under	0.188	0.188
12 & 14	0.188	0.250
16	0.219	0.281
18	0.250	0.312
20 & 22	0.281	0.344
24	0.312	0.375
26	0.344	0.406
28	0.375	0.438
30	0.406	0.469
32	0.438	0.500
34 & 36	0.469	0.532
38	0.500	0.562
40	0.531	0.594
42	0.562	0.625
44 & 46	0.594	0.657
48	0.625	0.688
50	0.656	0.719
52	0.688	0.750
54	0.719	0.781
56 & 58	0.750	0.812
60	0.781	0.844
62	0.812	0.875
64	0.844	0.906
66 & 68	0.875	0.938
70	0.906	0.969
72	0.938	1.000

- F. Coated steel pipe that is bored or jacked into place shall conform to the wall thickness requirements for uncoated steel pipe since the coating may be damaged during installation.
- G. Smooth wall steel pipes with a nominal diameter over 72 inches will not be permitted.

**4.3.3 Corrugated Steel Pipe and Corrugated Structural Steel Plate Pipe**

- A. Corrugated steel pipe and corrugated structural steel plate pipe may be used for a casing only when placed by the open cut method. Jacking or boring through the railroad embankment is not permitted.
- B. Corrugated steel pipe and corrugated structural steel plate pipe may be used for a casing provided the pressure in the carrier pipe is less than 100 psi.
- C. Pipe shall be bituminous coated and shall conform to the current American Railway Engineering and Maintenance-of-Way Association Specifications Chapter 1, Part 4.
- D. Corrugated steel pipe shall have a minimum sheet thickness as shown in Table 4. Corrugated structural steel plate pipe shall have a minimum plate thickness of 8 gage, 0.168 in. If computations indicate that a greater thickness is required, the thicker sheet or plate shall be used.

**Table 4**

Pipe Diameter		Sheet Thickness
Inches	Gage	Inches
12 to 30	14	0.079
36	12	0.109
42 to 54	10	0.138
60 to 120	8	0.168

**4.3.4 Steel Tunnel Liner Plates**

- A. Liner plates shall be installed by the tunneling method as detailed in Section 5.15 of this specification.
- B. Tunnel liner plates shall be galvanized and bituminous coated and shall conform to current AREMA Specification Chapter 1, Part 4, Section 4.16. If the tunnel liner plates are used only to maintain a tunneled opening until the carrier pipe is installed, and the annular space between the carrier pipe and the tunnel liner is completely filled with cement grout within a reasonably short time after completion of the tunnel, then the tunnel liner plates need not be galvanized and coated.
- C. Tunnel liner plates are to be a minimum of 12 gage and shall be fabricated from structural quality, hot-rolled, carbon-steel sheets or plates conforming to ASTM Specification A 569.
- D. The following liner plate information must be shown on the Pipe Data Sheet (plate I):
  - (1) Number of flanges (2 or 4)
  - (2) Width of plate
  - (3) Type of plate (smooth or corrugated)

#### **4.3.5 Concrete Encasement**

- A. At locations where the installation is by open cut and a casing pipe is required but cannot be installed due to elbows or other obstructions, concrete encasement may be used when approved by NS.
- B. The concrete encasement must provide a minimum cover of 6 inches of concrete around the pipe. A 6 x 6 – W 2.9 x W 2.9 (152 x 152 MW 18.7 x MW 18.7) welded wire fabric shall be placed in the concrete on all sides.

#### **4.4 Carrier Pipe**

##### **4.4.1 General Requirements**

- A. The pipe shall be laid with sufficient slack so that it is not in tension.
- B. Steel pipe shall not be used to convey sewage, storm water or other liquids which could cause corrosion.
- C. Carrier pipes which are not encased and are located on NS's right-of-way or under tracks which NS operates, shall be manufactured in accordance with the following specifications:
  - (1) Steel Pipe – The ASTM or API specification and grade for the pipe is to be shown on the Pipe Data Sheet. The specified minimum yield strength is to be at least 35,000 psi (241 MPa). For flammable substances see Sections 4.42 and 4.43 for additional requirements.
  - (2) Ductile Iron Pipe – ANSI A21.51/AWWA C151
  - (3) Corrugated Metal Pipe – AREMA Chapter 1, Part 4
- D. Carrier pipes installed within a casing pipe shall be designed for the internal pressure to which it will be subjected.
- E. Gravity flow carrier pipes, installed without a casing pipe, shall meet the requirements, of the particular pipe material, as given in Section 4.3 of this specification.

##### **4.4.2 Pipelines Carrying Flammable Substances**

- A. Pipelines carrying oil, liquefied petroleum gas and other flammable liquid products shall be of steel and conform to the requirements of the current ANSI B 31.4 Liquid Transportation Systems for Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia, and Alcohols, and other applicable ANSI codes, except that the maximum allowable stresses for design of steel pipe shall not exceed the following percentages of the specified minimum yield strength (multiplied by the longitudinal joint factor) of the pipe as defined in the above codes:
  - (1) The following percentages apply to hoop stress in steel pipe within a casing under railroad tracks, across NS right-of-way and longitudinally on NS right-of-way:
    - (a) Seventy-two percent on oil pipelines.
    - (b) Fifty percent for pipelines carrying condensate, natural gasoline, natural gas liquids, liquefied petroleum gas, and other liquid petroleum products.
    - (c) Sixty percent for installations on gas pipelines.

- (2) The following percentages apply to hoop stress in steel pipe laid longitudinally on NS right-of-way without a casing:
  - (a) Sixty percent for oil pipelines.
  - (b) Forty percent for pipelines carrying condensate, natural gasoline, natural gas liquids, liquefied petroleum gas, and other liquid petroleum products.
  - (c) For gas pipelines see Section 4.4.3.b.

**B.** Computations, based on the above requirements and stamped by a P.E., shall be submitted with the application occupancy.

#### **4.4.3 Uncased Pipelines Carrying Gas**

- A.** Pipelines carrying flammable and nonflammable gas products shall be steel and shall conform to the requirements of the current ANSI B 31.8 Gas Transmission and Distribution Piping Systems, and other applicable ANSI codes.
- B.** The minimum wall thickness for uncased carrier pipe shall be in accordance with the values provided in AREMA, Chapter 1, Part 5, Section 5.2, Tables 5.2.3 (a through j).
- C.** A durable coating, which will resist abrasion (fusion bonded epoxy or other suitable material), shall be used to protect the uncased pipeline when the boring method of installation is used.
- D.** If NS determines there is the potential for damage to the uncased pipeline (foreign material in the subgrade, third party damage, etc.) special protection of the pipeline will be required. Special may include the use of a protection slab over the pipeline, increased depth of bury or other means.

#### **4.5 Casing Pipe End Seals**

- A.** Casings for carrier pipes of flammable and hazardous substances shall be suitably sealed to the outside of the carrier pipe. Details of the end seals shall be shown on the plans.
- B.** Casings for carrier pipes of non-flammable substances shall have both ends of the casing blocked up in such a way as to prevent the entrance of foreign material but allowing leakage to pass in the event of a carrier break.
- C.** The ends of a casing pipe may be left open when the ends are at or above ground surface and above high water level, provided drainage is affordable in such a manner that leakage will be conducted away from railroad tracks and structures.

#### **4.6 Vents**

- A.** Sealed casings for flammable substances shall be properly vented. Vent pipes shall be of sufficient diameter, but in no case less than two inches in diameter, and shall be attached near each end of the casing and project through the ground surface at right-of-way lines or not less than 45 feet, measured at right angles from centerline of nearest track.
- B.** Vent pipes shall extend not less than 4 feet above the ground surface. Top of vent pipe shall have a down-turned elbow, properly screened, or a relief valve. Vents in locations subject to high water shall

be extended above the maximum elevation of high water and shall be supported and protected in a manner approved by NS.

- C. Vent pipes shall be at least 4 feet, vertically, from aerial electric wires or greater if required by national Electrical Safety Code (ANSI C2).
- D. When the pipeline is in a public highway, street-type vents shall be installed.

#### **4.7 Signs**

- A. All pipelines (except those in streets or access roads where it would not be practical to do so) shall be prominently marked at right-of-way lines (on both sides of track for crossings) by durable, weatherproof signs located over the centerline of the pipe. Signs shall show the following:
  - (1) Name and address of applicant
  - (2) Contents of pipe
  - (3) Pressure in pipe
  - (4) Emergency telephone number
- B. For pipelines running longitudinally on NS property, signs shall be placed over the pipe (or offset and appropriately marked) at all changes in direction of the pipeline. Such signs should also be located so that when standing at one sign the next adjacent marker in either direction is visible. In no event shall they be placed more than 500 feet apart unless otherwise specified by NS.
- C. The applicant must maintain all signs on NS right-of-way as long as the occupational agreement is in effect.

#### **4.8 Warning Tape**

- A. All pressure pipelines installed on NS right-of-way by open cut shall have detectable underground warning tape placed a minimum distance of 18 inches directly above the pipeline with the tape placed not less than 12" below grade.

#### **4.9 Shut-off Valves**

- A. Accessible emergency shut off valves shall be installed within effective distances each side of the railroad at locations selected by NS where hazard to life and property must be guarded against. No additional valves will be required where pipelines are provided with automatic control stations and within distances approved by NS.

#### **4.10 Cathodic Protection**

- A. Cathodic protection shall be applied to all pipelines carrying flammable substances on NS's right-of-way.
- B. For crossings and at other locations where the pipeline must be placed within a casing, the casing is to have cathodic protection, or the wall thickness is to be increased to the requirements of Section 4.3.2 Table 2.

- C. Uncased gas carrier pipes must be coated and cathodically protected to industry standards and test sites, for monitoring the pipeline, provided within 50 feet of the crossing.
- D. Where casing and/or carrier pipes are cathodically protected by other than anodes, NS shall be notified and a suitable test made to ensure that other railroad structures and facilities are adequately protected from the cathodic current in accordance with the recommendation of current Reports of Correlating committee on Cathodic Protection, published by the National Association of Corrosion Engineers.
- E. Where sacrificial anodes are used the locations shall be marked with durable signs.

#### **4.11 Manholes**

- A. Manholes shall not be located on NS property where possible. At locations where this is not practical, including longitudinal occupancies, manholes shall be precast concrete sections conforming to ASTM Designation C 478, "Specification for Precast Concrete Manhole Sections".
- B. The top of manholes located on NS property shall be flush with the top of ground and shall not be located with service or access roads.
- C. The distance from centerline of adjacent track to centerline of proposed manhole shall be shown on the plans.

#### **4.12 Box Culverts**

- A. Reinforced concrete box culverts shall conform to the requirements of the most recent edition of Norfolk Southern's Public Projects Manual, available here:  
<http://www.nscorp.com/content/nscorp/en/transportation-terms/other-requirements/public-project-guidelines.html>.

#### **4.13 Drainage**

- A. Occupancies shall be designed, and their construction shall be accomplished, so that adequate and uninterrupted drainage NS right-of-way is maintained.
- B. All pipes, ditches, spillways, overflows, and other structures carrying surface drainage on or to NS property and/or under NS track(s) shall be designed to carry the run-off from a one hundred (100) year storm. Computations indicating this design, prepared by a Professional Engineer, and suitable topographic plans, outlining the total drainage area, shall be submitted.
- C. If the drainage is to discharge into an existing drainage channel on NS's right-of-way and/or through a drainage structure under NS track(s), the computations must include the hydraulic analysis of any existing ditch and/or structure.
- D. When calculating the capacity of existing or proposed drainage structures, under NS track(s), the headwater at the structure shall not be greater than 1.5.
- E. Pipe(s) used to carry surface drainage on NS right-of-way shall have a minimum diameter of 36 inches.
- F. Detention ponds must not be placed on any part of NS's right-of-way. Also, the railroad embankment must not be used as any part of a detention pond structure.
- G. Formal approval of the proposed design, by the appropriate governmental agency having jurisdiction, shall be submitted with the drainage computations.

#### **4.14 Pipelines on Bridges**

- A.** Pipelines of any types shall not be installed on any bridge carrying NS tracks.
- B.** New overhead pipe bridges shall not be constructed over NS's right-of-way where underground installation of the pipeline is possible. Where the applicant can show that no practicable alternative is available, this type of structure will be permitted provided the following conditions are met:
  - (1) The vertical clearance, distance from top of rail to bottom of structure, is shown and is a minimum of 23 feet, measured at a point 6 feet horizontally from centerline track.
  - (2) The support bents for the overhead structure are located off of NS's right-of-way or a minimum clear distance of 18 feet from centerline track, whichever distance is greater.
  - (3) Support bents within 25 feet of centerline track have pier protection in accordance with AREMA requirements.
  - (4) Complete structural plans and design computations for the structure and foundations, stamped by a Professional Engineer, are submitted with the application.
  - (5) A fence (with barbed wire) or other measures are provided which will prevent access to the bridge by unauthorized personnel or vandals.
- C.** Pipelines carrying flammable substances or non-flammable substances, which by their nature might cause damage if escaping on or near railroad facilities or personnel, shall not be installed on bridges over NS tracks. In special cases when it can be demonstrated to NS's satisfaction that such an installation is necessary and that no practicable alternative is available, NS may permit the installation and only by special design approved by NS.
- D.** When permitted, pipelines on bridges over NS tracks shall be so located as to minimize the possibility of damage from vehicles, railroad equipment, vandalism and other external causes. Leak protection extending across the NS right-of-way shall be provided as directed by NS (See Plate VII).

### **5.0 CONSTRUCTION REQUIREMENTS**

#### **5.1 Method of Installation**

##### **5.1.1 General Requirements**

- A.** Bored, jacked or tunneled installations shall have a bore hole essentially the same as the outside diameter of the pipe plus the thickness of the protective coating.
- B.** The use of water or other liquids to facilitate casing emplacement and spoil removal is prohibited except when used in conjunction with Directional Boring Method "A" (see section 5.1.6).
- C.** If during installation an obstruction is encountered which prevents installation of the pipe in accordance with this specification, the pipe shall be abandoned in place and immediately filled with grout. A new installation procedure and revised plans must be submitted to, and approved by, NS before work can resume.

##### **5.1.2 Track and Ground Monitoring**

- A.** General track and ground monitoring requirements

- (1) General requirement
  - a. Temporary lighting may also be required by the NS to identify tripping hazards to train crewmen and other NS personnel.
  - b. Any excavation, holes or trenches on the NS property shall be covered, guarded and/or protected. Handrails, fence, or other barrier methods must meet OSHA and FRA requirements.
- (2) Track and ground monitoring are required as follows:
  - a. For crossings with pipe diameter and depth (below base of rail) as shown below in
  - b. For shoring within Zone 1 of any track, as shown below in PLATE VIII.
  - c. Additional monitoring may be required by the NS on a case by case basis.
- (3) Monitoring schedule
  - a. Monitoring shall commence once any construction activity is within Zone 1. See PLATE VIII.
  - b. Monitoring shall continue through completion of installation and may be required after completion for a period of time determined by NS or its representative.

**Table 5.1.2-1**

Final Bore Hole, inches

		1-5	6-12	12-24	24 - 42	42 - 54	54 - 60	>60
Depth, feet (below base of rail)	5	X	X	X	X	X	X	X
	10	X	X	X	X	X	X	X
	15		X	X	X	X	X	X
	20			X	X	X	X	X
	25				X	X	X	X
	30					X	X	X
	>30						X	X

X = Track Monitoring is required

**B. Track Monitoring**

(1) Track Deflection Limits

(2) Targets

- a. Track monitoring shall not require track access other than to place the track monitoring targets.
- b. Monitoring targets should be placed such that monitoring is possible when a train is present. However, monitoring during the passing of a train is not required as the train will temporarily deflect the track.
- c. Adhesive backed reflective targets may be attached to the side of the rail temporarily. Targets should be removed once monitoring phase is complete.

(3) Monitoring Plan

- (4) If the top of rail does deflect more than values listed below, all operations shall stop until the matter is resolved.



- a. Track monitoring values for Class 3 through Class 4:
  1. Threshold value = 1/8 inch permanent vertical or horizontal deflection
  2. Installation Shutdown value = 1/4 inch permanent vertical or horizontal deflection
- b. Track monitoring values for Class 1 through Class 2:
  1. Threshold value = 1/4 inch permanent vertical or horizontal deflection
  2. Installation Shutdown value = 1/2 inch permanent vertical or horizontal deflection
- c. Provide established contingency plan, see Section D, in the event of ground loss and/or the rail deviates 1/4 inch vertical or horizontal.
- d. Establish a benchmark in the vicinity of the construction. Establish locations for shooting elevations on the top of rail at each area of construction.
  1. Example locations for shooting rail elevations would be at:
    - At the centerline of an under-track crossing.
    - At both outside edges of the crossing i.e. for a wide excavation.
    - At multiple locations from the crossing/excavation edge but no less than 10, 20, 30, 40 and 50 feet from the crossing.
- e. Monitoring shall be continuous and recorded in a field logbook dedicated for this purpose. Copies of these field log entries can be made available to all concerned parties upon request at any time during construction.

#### C. Ground Monitoring

- (1) Provide means for monitoring ground settlement. Submit monitoring plan for NS review.
- (2) Ground monitoring points should be in alignment above the proposed construction activities.

#### D. Contingency Plans

- (1) The Contractor shall supply Contingency Plan(s), which anticipate reaching the Threshold and Installation Shutdown values, for all construction activities which may result in horizontal and/or vertical track deflection.
  - a. Track monitoring values for Class 3 through Class 4:
    1. Threshold value = 1/8 inch permanent vertical or horizontal deflection
    2. Installation Shutdown value = 1/4 inch permanent vertical or horizontal deflection
  - b. Track monitoring values for Class 1 through Class 2:
    1. Threshold value = 1/4 inch permanent vertical or horizontal deflection
    2. Installation Shutdown value = 1/2 inch permanent vertical or horizontal deflection
- (2) The Contingency Plans shall provide means and methods, with options if necessary.
- (3) The Contractor should anticipate the need to implement each Contingency Plan with required materials, equipment and personnel.
  - a. Once the Threshold value is met, the contractor shall determine the appropriate Contingency Plan(s) and immediately discuss this plan with, and receive approval confirmation from, the NS.
  - b. Once the Installation Shutdown value is exceeded all project work shall stop and the chosen

Contingency Plan shall commence. NS may choose to allow and/or require the immediate implementation of ~~specific~~ approved Contingency Plans, submitted by the contractor, once the Installation Shutdown value is exceeded.

### 5.1.3 Open Cut

- A. Open cut is a non-standard procedure that should be avoided whenever possible. The applicant must request a variance for open cut approval when making application for occupancy. Applicant should be aware that open cut applications and procedures have the potential to result in additional NS charges.
- B. Installations beneath the track by open trench methods will be permitted only with the approval of the AVP Maintenance of Way & Structures.
- C. Installations by open cut will not be permitted under mainline tracks, tracks carrying heavy tonnage or tracks carrying passenger trains. Also, open cut shall not be used within the limits of a highway/railroad grade crossing or its approaches, 25 feet either side of traveled way, wherepossible.
- D. At locations where open cut is permitted, the trench is to be backfilled with crushed stone with a top size of the aggregate to be a maximum of 2 inches and to have no more than 5% passing the number 200 sieve. The gradation of the material is to be such that a dense stable mass is produced.
- E. The backfill material shall be placed in loose 6 inch lifts and compacted to at least 95% of its maximum density with a moisture content that is no more than 1% greater than or 2% less than the optimum moisture as determined in accordance with current ASTM Designation D – 1557 (Modified Proctor). When the backfill, material is within 3 feet of the subgrade elevation (the interface of the ballast and the subsoil) a compaction of at least 98% will be required.
- F. All backfilled pipes laid either perpendicular or parallel to the tracks must be designed so that the backfill material will be positively drained. This may require the placement of lateral drains on pipes laid longitudinally to the track and the installation of stub perforated pipes at the edge of the slopes.
- G. Unless otherwise agreed upon, all work involving rail, ties and other track material will be performed by NS employees, at such times as are consistent with NS work schedules regarding the availability of said employees, and at the sole expense of the applicant.

### 5.1.4 Bore and Jack (Steel Pipe)

- A. This method consists of pushing the pipe into the earth with a boring auger rotating within the pipe to remove the spoil.
- B. The boring operation shall be progressed on a 24-hour basis without stoppage in Zone 1, 2, and 3 as indicated in Plate VIII (except for adding lengths of pipe) until the leading edge of the pipe has reached the receiving pit.
- C. The front of the pipe shall be provided with mechanical arrangements or devices that will positively prevent the auger from leading the pipe so that no unsupported excavation is ahead of the pipe.
- D. The auger and cutting head arrangement shall be removable from within the pipe in the event an obstruction is encountered. If the obstruction cannot be removed without excavation in advance of the pipe, procedures as outlined in Section 5.1.1c. must be implemented immediately.
- E. The over-cut by the cutting head shall not exceed the outside diameter of the pipe by more than ½ inch. If voids should develop or if the bored hole diameter is greater than the outside diameter of the pipe (plus coating) by more than approximately 1 inch, grouting (see Section 5.2) or other methods approved

by NS, shall be employed to fill such voids.

- F. The face of the cutting head shall be arranged to provide a reasonable obstruction to the free flow of soft or poor material.
- G. Plans and description of the arrangement to be used shall be submitted to NS for approval and no work shall proceed until such approval is obtained.
- H. Any method that employs simultaneous boring and jacking for pipes over 8 inches in diameter that does not have the above approved arrangement **will not be permitted**. For pipe 8 inches and less in diameter, augering or boring without this arrangement may be considered for use only as approved by NS.

#### **5.1.5 Jacking (Steel Pipe)**

- A. This method consists of pushing sections of pipe into position with jacks placed against a backstop and excavation performed by hand from within the jacking shield at the head of the pipe. Ordinarily 36-inch pipe is the least size that should be used, since it is not practical to work within smaller diameter pipes.
- B. Jacking shall be in accordance with the current American Railway Engineering Association Specifications, Chapter 1, Part 4 "Jacking Culvert Pipe Through Fills." This operation shall be conducted without hand-mining ahead of the pipe and without the use of any type of boring, auguring, or drilling equipment.

Bracing and backstops shall be so designed and jacks of sufficient rating used so that the jacking can be progressed on a 24-hour basis without stoppage in Zone 1, 2, and 3 as indicated Plate VIII.(except for adding lengths of pipe) until the leading edge of the pipe has reached the receiving pit.

- C. Immediately upon completion of jacking operation, the installation shall be pressure grouted as per Section 5.2 of this specification.

#### **5.1.6 Tunneling (Tunnel Liner Plate)**

- A. This method consists of placing rings of liner plate within the tail section of a tunneling shield or tunneling machine. A tunneling shield shall be used for all liner plate installations unless otherwise approved by NS.
- B. The shield shall be of steel construction, designed to support a railroad track loading as specified in Section 4.1.3 of this specification, in addition to the other loadings imposed. The advancing face shall be provided with a hood, extending no less than 20 inches beyond the face and extending around no less than the upper 240 degrees of the total circumference. It shall be of sufficient length to permit the installation of at least one complete ring of liner plates within the shield before it is advanced for the installation of the next ring of liner plates. The shield shall conform to and not exceed the outside dimensions of the liner plate tunnel being placed by more than 1 inch at any point on the periphery unless otherwise approved by NS.
- C. The shield shall be adequately braced and provided with necessary appurtenances for completely bulkheading the face with horizontal breast boards and arranged so that the excavation can be benched as may be necessary. Excavation shall not be advanced beyond the edge of the hood, except in rock.
- D. Manufacturer's shop detail plans and manufacturer's computations showing the ability of the tunnel liner plates to resist the jacking stresses shall be submitted to NS for approval.
- E. Unless otherwise approved by NS, the tunneling shall be conducted continuously, on a 24-hour basis,

until the tunnel liner extends at least beyond the theoretical railroad embankment line with no stoppage within Zone 1, 2, and 3 as indicated (See Plate VIII).

- F. At any interruption of the tunneling operation, the heading shall be completely bulkheaded.
- G. The liner plates shall have tapped grout holes for no smaller than 1 ½ inch pipe, spaced at approximately 3 feet around the circumference of the tunnel liner and 4 feet longitudinally.
- H. Grouting behind the liner plates shall be in accordance with Section 5.2 of this specification.

#### **5.1.7 Directional Boring / Horizontal Directional Drilling (Steel Pipe)**

##### **Method "A"**

- A. This method consists of setting up specialized drilling equipment on existing grade (launching and receiving pits are not required) and boring a small diameter pilot hole on the desired vertical and horizontal alignment, using a mechanical cutting head with a high pressure fluid (bentonite slurry) to remove the cuttings. The drill string is advanced with bentonite slurry pumped through the drill string to the cutting head and then forced back along the outside of the drill string, carrying the cuttings back to the surface for removal. When the cutting head reaches the far side of the crossing, it is removed and a reamer (with a diameter greater than the cutting head) is attached to the lead end of the drill string. The

pipeline is attached to the reamer and the pilot hole is then back reamed while the pipeline is pulled into place.

- B. This method is used to place pipelines under rivers, wetlands and other obstructions which would be difficult to cross by conventional methods. The length of the bore is generally several hundred feet in length, with installations over a thousand feet possible.
- C. Consideration will be given where the depth of cover is greater than 10 feet below the base of the rail, or the bore is in rock. Factors considered will be track usage, pipe size, contents of pipeline, soil conditions, etc.
- D. The following preliminary information must be submitted with the request for consideration of this type of installation:
  - (1) A site plan of the area.
  - (2) A plan view and profile of the crossing
  - (3) A Pipe Data Sheet
  - (4) Appropriately spaced soil borings along the proposed pipeline route
  - (5) A construction procedure, including a general description of equipment to be used

If NS determines this method of installation is acceptable, final design plans and specifications are to be prepared and submitted for approval.

- E. The project specifications must require the contractor to submit, to NS for approval, a complete construction procedure of the proposed boring operation. Included with the submission shall be the manufacturer's catalog information describing the type of equipment to be used.
- F. Maximum pipe size for HDD application shall be 36" in diameter.
- G. Any over-cut by the cutting head should be minimized to match the pipe being installed. Any over-cut shall be no more than 2" larger than the installed pipeline. If voids should develop or if the bored

hole diameter is greater than the outside diameter of the pipe (plus coating) by more than approximately 1 inch, grouting (see Section 5.2) or other methods approved by NS, shall be employed to fill such voids. HDD can be progressed on a 24- hour basis without stoppage in Zone 1, 2, and 3 as indicated Plate VIII.

- H. The applicant's engineer shall provide the project geotechnical analysis to the NS representative for review. Specify the maximum drilling fluid pressures so that applicant's engineer can ensure that frac-out does not occur. As a general rule of thumb, the fluid pressure must not exceed the uplift capacity of the soil (nominally 1 psi per foot of depth).

Reference National Utility Contractors Association (NUCA) "*Trenchless Construction and Rehabilitation Methods*" (4<sup>th</sup> Edition) and ASCE's "*Pipeline Design for Installation by Horizontal Directional Drilling*" (4<sup>th</sup> Edition). Per NUCA, "Important physical properties that need to be determined include strength, grain size, moisture content, plasticity characteristics, compressibility, and permeability of the deposits".

Further geotechnical analysis by the applicant may be required to verify that railroad tracks, property and facilities will not be affected by the proposed bore.

### **Method "B"**

- A. This method is used to place small diameter conduit for electric lines and other utilities. This method consists of using hydraulic jacking equipment to push a solid steel rod under the railroad from a launching pit to a receiving pit. At the receiving pit, a cone shaped "expander" is attached to the end of the rod and the conduit (casing pipe) is attached to the expander. The rod, expander and conduit are then pulled back from the launching pit until the full length of the conduit is in place.
- B. This method may be used to place steel conduit (casing pipe), up to and including 6 inches in diameter, under the railroad.
- C. The project specifications must require the contractor to submit, to NS for approval, a complete construction procedure of the proposed boring operation. Included with the submission shall be the manufacturer's catalog information describing the type of equipment to be used.
- D. Maximum pipe size for HDD application shall be 36" in diameter.
- E. Any over-cut by the cutting head should be minimized to match the pipe being installed. Any over-cut shall be no more than 2" larger than the installed pipeline. If voids should develop or if the bored hole diameter is greater than the outside diameter of the pipe (plus coating) by more than approximately 1 inch, grouting (see Section 5.2) or other methods approved by NS, shall be employed to fill such voids. HDD can be progressed on a 24- hour basis without stoppage in Zone 1, 2, and 3 as indicated Plate VIII.
- F. The applicant's engineer shall provide the project geotechnical analysis to NS representative for review. Specify the maximum drilling fluid pressures so that applicant's engineer can ensure that frac-out does not occur. As a general rule of thumb, the fluid pressure must not exceed the uplift capacity of the soil (nominally 1 psi per foot of depth).

Reference National Utility Contractors Association (NUCA) "*Trenchless Construction and Rehabilitation Methods*" (4<sup>th</sup> Edition) and ASCE's "*Pipeline Design for Installation by Horizontal Directional Drilling*" (4<sup>th</sup> Edition). Per NUCA, "Important physical properties that need to be determined include strength, grain size, moisture content, plasticity characteristics, compressibility, and permeability of the deposits".

Further geotechnical analysis by the applicant may be required to verify that railroad tracks, property

and facilities will not be affected by the proposed bore.

#### **5.1.8 Tunnel Boring Machines and Microtunneling**

- A.** A tunnel boring machine (TBM), also known as a "mole", is a machine used to excavate tunnels with a circular cross section through a variety of soil and rock strata. May also be used called Microtunneling for smaller tunnels.
- B.** Use of TBM will be considered for installations of pipelines at least 20-feet below base of rail.
- C.** Plans must indicate locations and depth of boring and receiving pits and shoring details as required in Section 5.8, below.
- D.** The submission must include a detailed soil analysis and the details of the machine to be used, including the type of boring head, type of slurry to be used (if applicable), and type of guidance system.

#### **5.1.9 Slip Lining**

- A.** Slip-lining is the process of replacing an existing carrier pipe within an existing casing pipe.
- B.** The submission must demonstrate that the existing casing is constructed of a material described in section 4 of this specification, including appropriate wall thickness and joints.
- C.** The submission must demonstrate that the existing casing is of an adequate length to meet the requirements of section 4.3.1 of this Specification.
- D.** The submission must include documentation that clearly demonstrates that the casing has not deteriorated to a point where it no longer complies with items B and C, above. If necessary, the applicant may apply for a right-of-entry permit as outlined in Section 1.4 of this Specification in order to excavate the ends of the existing casing for a thorough inspection.

#### **5.1.10 Cured In Place Pipe (CIPP)**

- A.** CIPP is a trenchless rehabilitation method used to repair existing pipelines from existing access points.
- B.** CIPP will be considered for rehabilitation of existing non-pressurized sewer and storm drain only.
- C.** Submission must include details of proposed access to existing pipe on either side of the Railroad right-of-way, and a detailed assessment and analysis of the condition of the existing pipe.
- D.** Submission must include details of the proposed pipe bypass system to be used during construction.
  - (1) The submission must include documentation that clearly demonstrates that the casing has not deteriorated to a point where it no longer complies with items B and C, above. If necessary, the applicant may apply for a right-of-entry permit as outlined in Section 1.4 of this Specification in order to excavate the ends of the existing casing for a thorough inspection.

#### **5.1.11 Pipe Bursting and Pipe Ramming**

- A.** Pipe Bursting is a trenches method of replacing buried pipelines such as sewer, water, or natural gas pipes without the need for a traditional trenching by expanding the diameter of the current pipe to receive a new pipe.
- B.** Pipe Ramming uses pneumatic percussive blows to drive the pipe through the ground without the use of an auger.

- C. Neither Pipe Bursting nor Pipe Ramming will be considered for installations beneath railroad track. Both methods may be considered at NS's discretion if the installation will not come closer than 25-feet to the centerline of any railroad track or closer than 50-feet to any other railroad structure.

## **5.2 Grouting**

- A. For jacked and tunneled installations, a uniform mixture of 1:6 (cement: sand) cement grout shall be placed under pressure through the grout holes to fill any voids which exist between the pipe or liner plate and the undisturbed earth.
- B. Grouting shall start at the lowest hole in each grout panel and proceed upwards simultaneously on both sides of the pipe.
- C. A threaded plug shall be installed in each grout hole as the grouting is completed at that hole.
- D. When grouting tunnel liner plates, grouting shall be kept as close to the heading as possible, using grout stops behind the liner plates if necessary. Grouting shall proceed as directed by NS, but in no event shall more than 6 lineal feet (1.8 m) of tunnel be progressed beyond the grouting.

## **5.3 Soil Stabilization**

- A. Pressure grouting of the soils or freezing of the soils before jacking, boring, or tunneling may be required at the direction of NS to stabilize the soils, control water, prevent loss of material and prevent settlement or displacement of embankment. Grout shall be cement, chemical or other special injection material selected to accomplish the necessary stabilization.
- B. The materials to be used and the method of injection shall be prepared by a Registered Professional Soils Engineer or by an experienced and qualified company specializing in this work and submitted for approval to NS before the start of work. Proof of experience and competency shall accompany the submission.

## **5.4 Dewatering**

- A. When water is known or expected to be encountered, pumps of sufficient capacity to handle the flow shall be maintained at the site, provided the contractor has received approval from NS to operate them. Pumps in operation shall be constantly attended on a 24-hour basis until, in the sole judgement of NS, the operation can be safely halted. When dewatering, close observation shall be maintained to detect any settlement or displacement of railroad embankment, tracks, and facilities.

## **5.5 Safety Requirements**

All operations shall be conducted so as not to interfere with, interrupt, or endanger the operation of trains nor damage, destroy, or endanger the integrity of railroad facilities. All work on or near NS property shall be conducted in accordance with NS safety rules and regulations. The contractor shall secure and comply with the NS safety rules and shall give written acknowledgement to NS that they have been received, read, and understood by the contractor and its employees. Operations will be subject to NS monitoring at any and all times.

- A. All cranes, lifts, or other equipment that will be operated in the vicinity of NS's electrification and power transmission facilities shall be electrically grounded as directed by NS.
- B. At all times when the work is being progressed, a field supervisor for the work with no less than twelve (12) months experience in the operation of the equipment being used shall be present. If boring equipment or similar machines are being used, the machine operator also shall have no less than twelve (12) months experience in the operation of the equipment being used.

- C. Whenever equipment or personnel are working closer than 15 feet from the centerline of an adjacent track, that track shall be considered as being obstructed. Insofar as possible, all operations shall be conducted no less than this distance. Operations closer than 15 feet from the centerline of a track shall be conducted only with the permission of, and as directed by, a duly qualified NS railroad employee or an authorized NS representative present at the site of the work.
- D. Construction near switching areas may require lighting.
- E. Crossing of tracks at grade by equipment and personnel is prohibited except by prior arrangement with and as directed by NS.

## 5.6 Blasting

- A. Blasting will not be permitted.

## 5.7 Protection of Drainage Facilities

- A. If, in the course of construction, it may be necessary to block a ditch, pipe or other drainage facility, temporary pipes, ditches or other drainage facilities shall be installed to maintain adequate drainage, as approved by NS. Upon completion of the work, the temporary facilities shall be removed, and the permanent facilities restored.
- B. Soil erosion methods shall be used to protect railroad ditches and other drainage facilities during construction on and adjacent to NS right-of-way.

## 5.8 Support of Excavation Adjacent to Track

### 5.8.1 Launching and Receiving Pits

- A. The location and dimensions of all pits or excavations shall be shown on the plans. The distance from centerline of adjacent track to face of pit or excavation shall be clearly labeled. Also, the elevation of the bottom of the pit or excavation must be shown on the profile.
- B. The face of all pits shall be located a minimum of 25 feet from centerline of adjacent track, **measured at right angles to track**, unless otherwise approved by NS.
- C. NS Typical Drawing No. 4 – Shoring Requirements shall govern the limits and type of required excavation support.
- D. All plans and calculations for shoring shall be prepared, signed and sealed by a Registered Professional Engineer licensed in the state of the project. The Engineer will be responsible for the accuracy for all controlling dimensions as well as the selection of soil design values which will accurately reflect the actual field conditions.
- E. The plans shall contain details of the shoring system showing sizes of all structural members, details of connection, *and* embedment depth. The plans shall include a plan view showing all the proposed excavations and distances from centerline of track to face of excavation. Plans shall show a section normal to the track showing the shoring location relative to the centerline of track and showing the height of sheeting and track elevation in relation to the bottom of excavation. The plans must be complete and accurately describe the nature of the work.
- F. Shoring in Zone 1 or 2, AREMA recommended practice is to be used for design. No increase in temporary stresses is permitted. Refer to AREMA Load Section.



- G. Design shall include 2 feet of spoils adjacent to the shoring and the first 1 foot below the dredge line is to be neglected for passive resistance
- H. Shoring location in Zone 2 as shown on NS Typical Drawing No. 4 – Shoring Requirements shall be designed using interlocking sheeting. Soldier piles and lagging will be considered only when its use is specifically approved by NS. Consideration for the use of soldier piles and lagging will only be made if the required penetration of steel sheet piling cannot be obtained and when dry, stable material will be encountered.
- I. All excavations with the limits shown on NS Typical Drawing No. 4 – Shoring Requirements shall be designed for railroad live load surcharge. All shoring designed for railroad live load surcharge shall be based on Cooper's E-80 live load. AREMA Chapter 8, Part 20, Section 3, Paragraph 2(b), refers to the Boussinesq equation as a method to determine lateral pressure values for railroad surcharge loading. NS Typical Drawing No. 5 – Shoring Design Guide – Lateral Pressures from Train Loads indicates the lateral pressures associated with various depths of excavation and distances from centerline of track as determine by the Boussinesq equation.
- J. Calculations for the proposed shoring shall include deflection calculations. The maximum deflection for excavations within 18'-0" of the centerline of the nearest tack shall be 3/8". For all other cases, the max deflections shall not exceed 1/2".
- K. Railings shall be constructed around all excavations on NS property. Walkways with railings shall be constructed over open excavations adjacent to the tracks located within the normal walkway. Refer to AREMA Section 15 for walkway and railing design criteria. Railings shall not be closer than 10'-0" horizontally from centerline of track. Railing shall be indicated on plans submitted for NS acceptance.
- L. Approval of the excavation plan does not relieve the applicant of ultimate responsibility and liability for the excavation plan.
- M. If the excavation pit design and shoring system will be submitted by the applicant's contractor, the applicant's contract specifications must require the applicant's contractor to obtain NS approval prior to beginning any excavation.

#### **5.8.2 Parallel Trenching and Other Excavation**

- A. NS Typical Drawing No. 4 – Shoring Requirements shall govern the limits and type of excavation support.
- B. The design and construction requirements for this construction shall be in accordance with the requirements of Section 5.8.1.

#### **5.9 Inspection and Testing**

- A. For pipelines carrying flammable or hazardous materials, ANSI Codes, current at time of constructing the pipeline, shall govern the inspection and testing of the facility on NS property, except as follows:
  - (1) One hundred percent of all field welds shall be inspected by radiographic examinations, and such field welds shall be inspected for 100 percent of the circumference.
  - (2) The proof testing of the strength of carrier pipe shall be in accordance with ANSI requirements.

#### **5.10 Reimbursement of Costs**

- A. All costs incurred by NS or its representative associated with the pipe installation (construction

monitoring, flagging, track work, protection of signal cables, etc.) shall be reimbursed by the applicant.

#### PUBLICATION STANDARDS SOURCES

ANSI	American National Standards Institute, Inc. 1899 L Street, NW, 11th Floor Washington, DC 20036 Tel: 202.293.8020
AREMA	American Railway Engineering Maintenance-of-Way Association 4501 Forbes Blvd., Suite 130 Lanham, MD 20706 Tel: 301.459.3200
ASTM	American Society for Testing and Materials 100 Barr Harbor Drive, PO Box C700 West Conshohocken, PA 19428 Tel: 610.832.9500
AWWA	American Water Works Association, Inc. 6666 West Quincy Avenue Denver, CO 80235 Tel: 303.794.7711 or 800.926.7337
NACE	National Association of Corrosion Engineers 15835 Park Ten Place Houston, TX 77084 Tel: 281.228.6200

NOTE: If other than ANSI, AREMA, ASTM, AWWA or NACE specifications are referred to for design, materials or workmanship on the plans and specifications for the work, then copies of the applicable sections of such other specifications referred to shall accompany the plans and specifications for the work.

## Plate I - Pipe Data Sheet

	CARRIER PIPE	CASING PIPE
CONTENTS TO BE HANDLED		
MAX. ALLOWABLE OPERATING PRESSURE		
NOMINAL SIZE OF PIPE		
OUTSIDE DIAMETER		
INSIDE DIAMETER		
WALL THICKNESS		
WEIGHT PER FOOT		
MATERIAL		
PROCESS OF MANUFACTURE		
SPECIFICATION		
GRADE OR CLASS (Specified Minimum Yield Strength)		
TEST PRESSURE		
TYPE OF JOINT		
TYPE OF COATING		
DETAILS OF CATHODIC PROTECTION		
DETAILS OF SEALS OR PROTECTION AT END OF CASING		
CHARACTER OF SUBSURFACE MATERIAL		
APPROXIMATE GROUND WATER LEVEL		
SOURCE OF INFORMATION ON SUBSURFACE CONDITIONS		

Proposed method of installation:

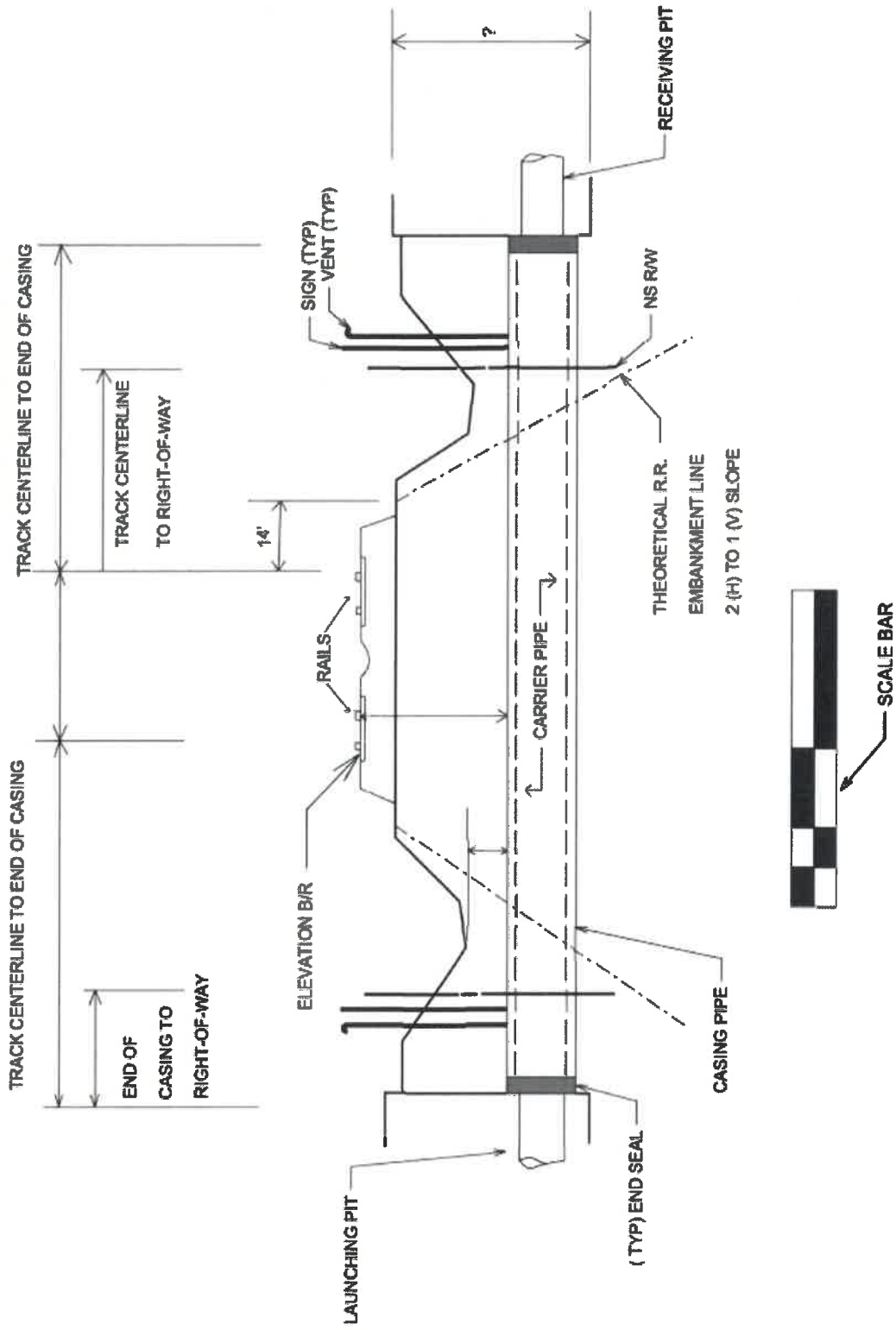
- Bore and jack (per Section 5.1.3 of NSCE-8)
- Jacking (per Section 5.1.4 of NSCE-8)
- Tunneling (with Tunnel Liner Plate) (per Section 5.1.5 of NSCE-8)
- Directional Bore/Horizontal Direction Drilling – Method A (per Section 5.1.6 of NSCE-8)
- Directional Bore/Horizontal Direction Drilling – Method B (per Section 5.1.6 of NSCE-8)
- Open Cut (per Section 5.1.2 of NSCE-8). *All installations directly under any track must be designed as a bored installation. Open cut installations will be considered on a case-by-case basis by Norfolk Southern's Division Superintendent at the time of installation.*
- Other (Specify): \_\_\_\_\_

Last Revised: 12/20/17

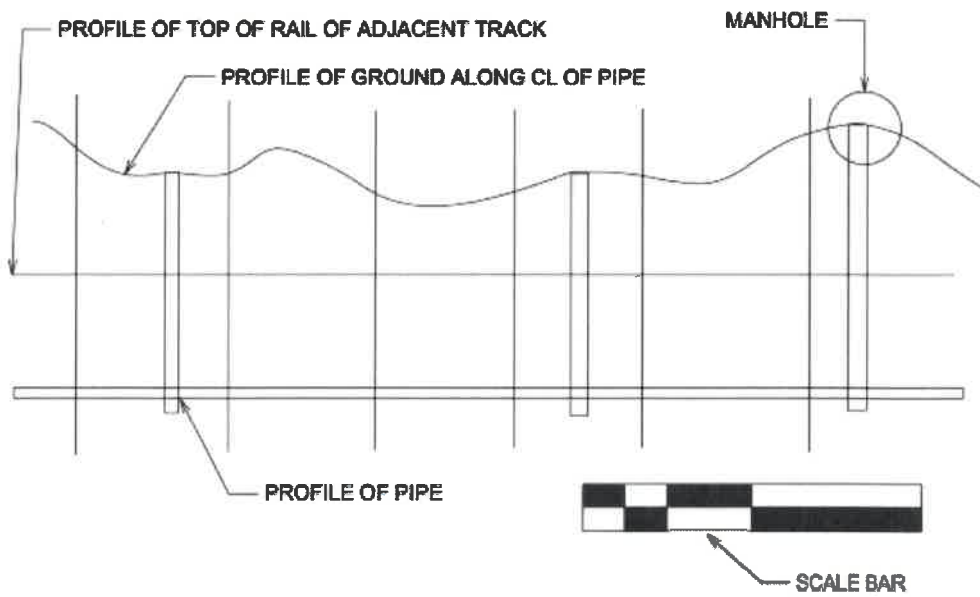
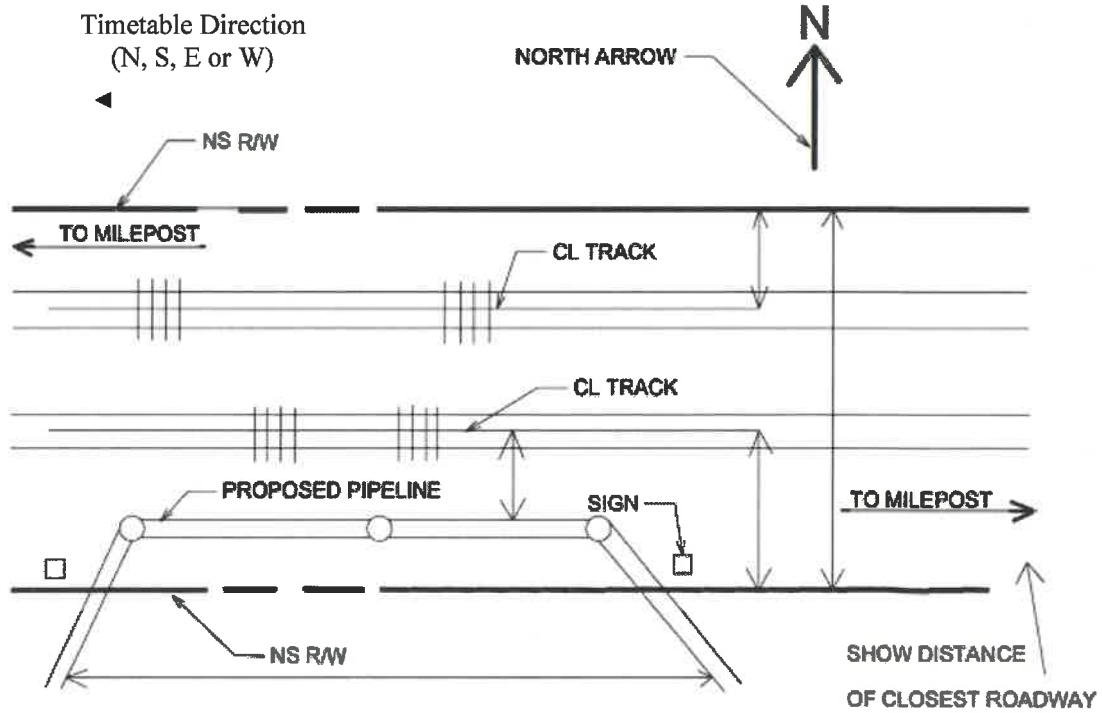


Looking Direction should be  
Increasing and Decreasing Milepost

### Plate III - Sample Pipe Profile View

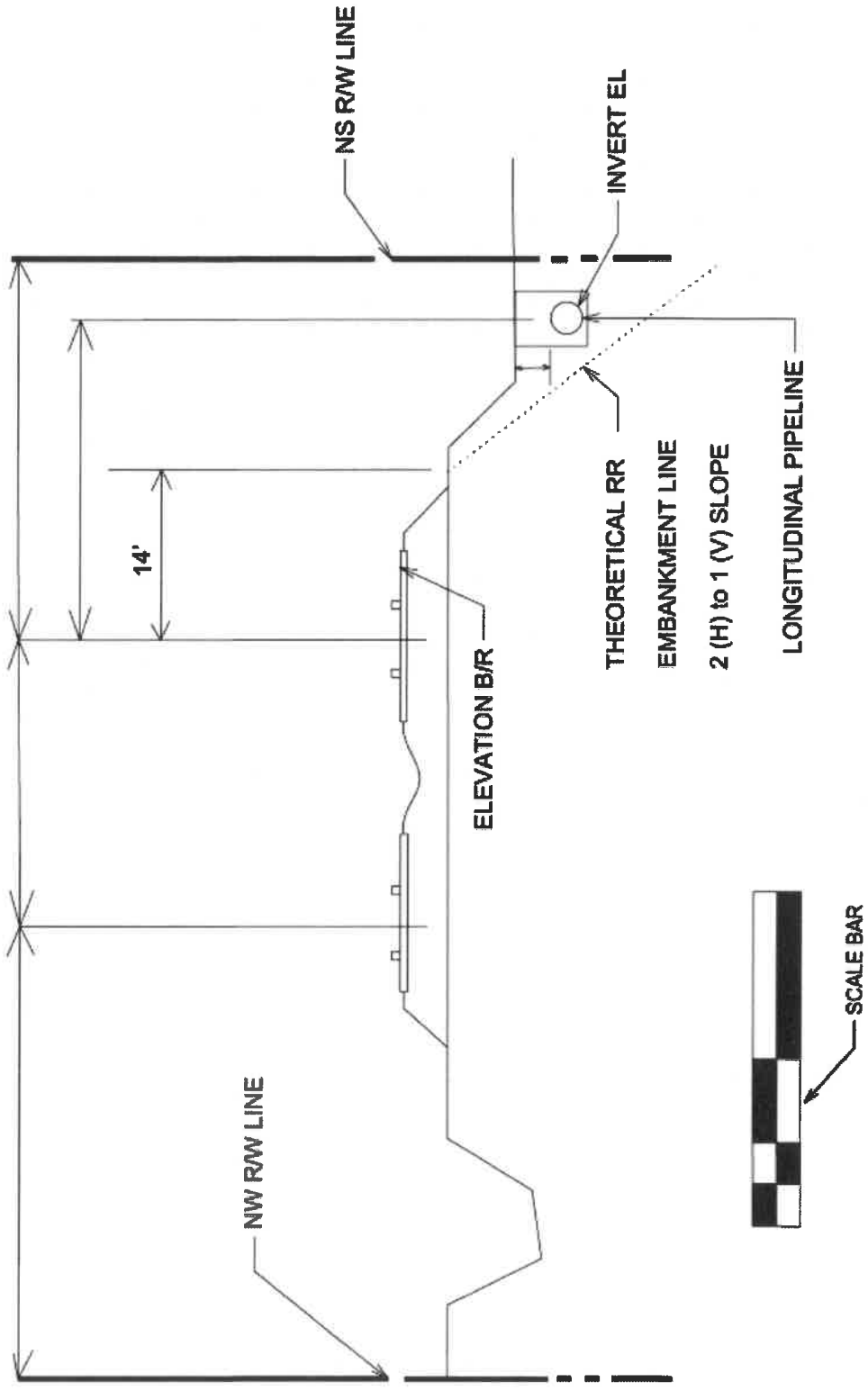


### Plate IV - Sample Pipe Parallel Plan and Profile Views

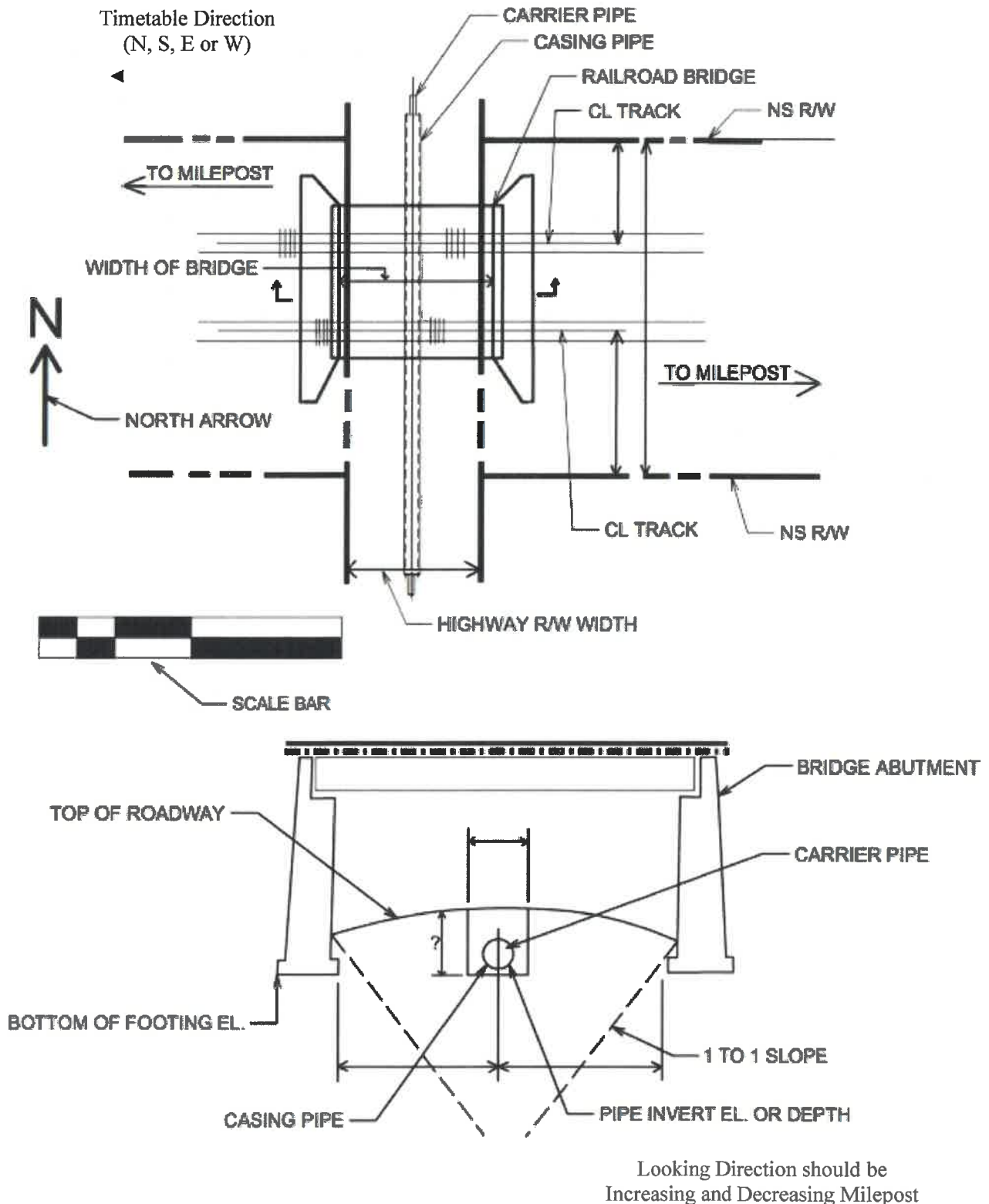


Looking Direction should be Increasing and Decreasing Milepost

**Plate V - Sample Pipe Parallel Section View**

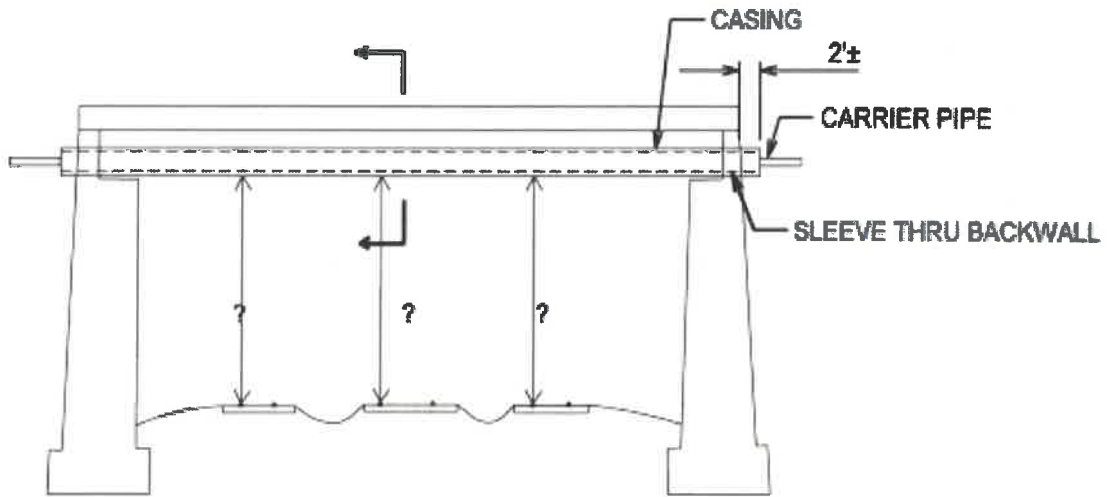


# Plate VI - Sample Pipe Plan and Section Under Railway Bridge

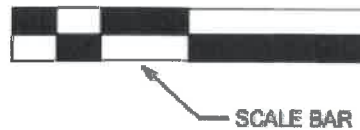
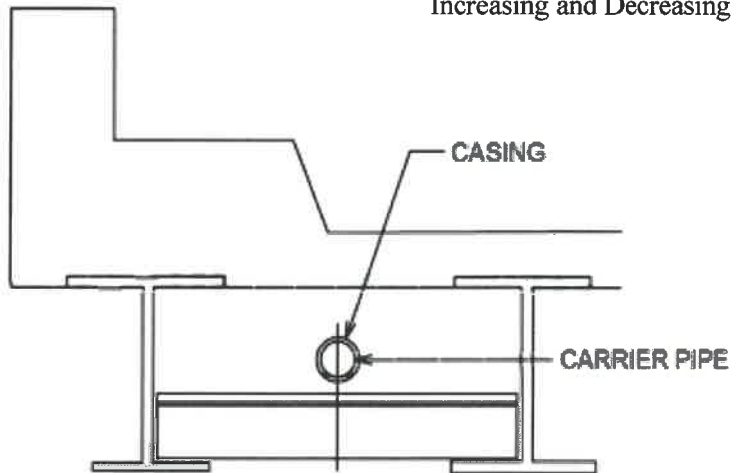




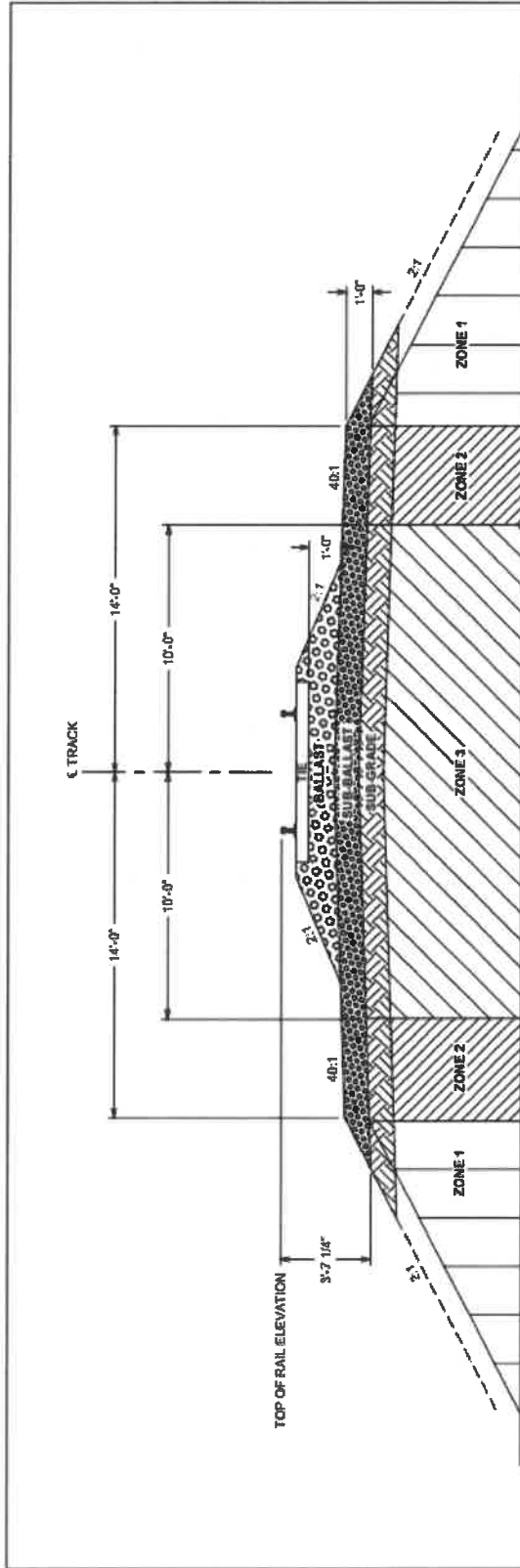
# PLATE VII - Sample Pipe Profile and Section Views Pipe in Highway Over Railway



Looking Direction should be  
Increasing and Decreasing Milepost



# PLATE VIII - Railway Shoring Requirements



## ROADBED PROFILE - SHORING REQUIREMENTS (NTS)

- ZONE 1 EXCAVATION WITHIN ZONE 1 WILL REQUIRE SHORING FOR THE PROTECTION OF THE RAILROAD
- ZONE 2 EXCAVATION WITHIN ZONE 2 WILL REQUIRE SHORING CONSISTING OF INTERLOCKING SHEETING FOR THE PROTECTION OF THE RAILROAD
- ZONE 3 NO EXCAVATIONS WILL BE ALLOWED IN ZONE 3

### NOTES:

1. EXCAVATIONS OUTSIDE OF ZONE 1 MAY REQUIRE SHORING FOR SAFETY. LATERAL PRESSURES DUE TO TRAIN LOADINGS DO NOT AFFECT SHORING DESIGN OUTSIDE OF ZONE 1.
2. REFER TO PUBLIC PROJECTS MANUAL APPENDIX H, SECTION H.1.B.A. (OVERHEAD BRIDGE) OR SECTION H.2.B.A. (UNDERPASS BRIDGE) AND APPENDIX H FOR ADDITIONAL SHORING LOCATION REQUIREMENTS.

**NORFOLK SOUTHERN**  
PUBLIC PROJECTS MANUAL  
TYPICAL DRAWINGS  
SHORING DESIGN GUIDE  
SHORING REQUIREMENTS

DATE	LTR	DESCRIPTION	REVISIONS
03/20/13	1	REVISE ZONE 2 OVERPASS AND AREA	
10/15	2	REVISED NOTE 2	

REV. NO.: 002-1 - CORR. - 6 - SHEET 4  
DATE: AUGUST 1, 2013  
DRAWING NO.: 4



# **RAILROAD INSURANCE REQUIREMENTS**

## Exhibit B

<b>INSURANCE REQUIREMENTS FOR: Right of Entry</b>		
<p>Licensee shall, at its sole cost and expense, procure and maintain during the life of this License the insurance coverage identified below. Licensee must provide a Certificate of Insurance certifying that the insurance limits and coverages, with the appropriate endorsements, all as outlined below are in effect.</p>		
<u>COVERAGE TYPE</u>	>	<u>MINIMUM COVERAGE</u>
<p><b>Commercial General Liability (CGL)</b></p> <p>Must include coverage for blanket contractual liability for the obligations assumed under contract including but not limited to:</p> <ul style="list-style-type: none"> <li>· Bodily injury and property damage</li> <li>· Fire legal liability</li> <li>· Pollution liability (sudden and accidental)</li> <li>· Emergency evacuation</li> <li>· The definition of insured contract shall be amended to remove any exclusion or other limitation for any work being done within 50 feet of rail property, if applicable.</li> <li>· Any exclusions related to the explosion, collapse and underground hazards shall be removed.</li> <li>· No other endorsements limiting coverage may be included on the policy with regards to the work being performed under this agreement.</li> </ul>	>	<p><b>\$10,000,000 Per Occurrence</b></p>
<p><b>All Risk Property</b></p> <p>All risks property insurance covering all of Licensee's property including property in the care, custody or control of Licensee. Coverage shall include the following:</p> <ul style="list-style-type: none"> <li>· Issued on a replacement cost basis.</li> <li>· Include a standard loss payable endorsement naming Railroad as the loss payee as its interests may appear.</li> </ul>	>	<p><b>Replacement Value</b></p>
<p><b>Automobile Liability</b></p> <p>Coverage must extend to all owned, hired, and non-owned vehicles and must include coverage for blanket contractual liability for the obligations assumed under contract.</p> <p>If applicable, Motor Carrier Act Endorsement – Hazardous materials clean up (MCS-90) is required.</p>	>	<p><b>\$2,000,000 Combined Single Limit Each Occurrence</b></p>
<p><b>Workers' Compensation</b></p> <p><b>Employers Liability</b></p>	>	<p><b>Statutory Limits where Services are to be performed</b></p> <p><b>\$1,000,000 Each Occurrence</b></p> <p><b>\$1,000,000 Disease Per Employee</b></p>
<p>Must include coverage for Longshoremen's and Harbor Workers' Compensation, if applicable, and coverage for Federal Employers' Liability Act, if applicable.</p>		
<p><b>Pollution Liability</b></p> <p>The policy shall provide for protection against claims for third-party bodily injury, property damage, environmental damage, and clean-up cost caused by pollution conditions resulting from actions taken under this contract.</p>	>	<p><b>\$10,000,000 Per Occurrence</b></p>
<p><b>Railroad Protective Liability</b></p>	>	<p><b>\$2,000,000 Per Occurrence</b></p> <p><b>\$6,000,000 Aggregate</b></p>

\*\*An Umbrella liability policy, which follows form, may be used to obtain the aforementioned limits.

Insurance Requirements continued on following page

### **Certificate Holder and Endorsement Requirements**

1. Railroad shall be listed as Certificate Holder as follows: Watco Companies, L.L.C., and its affiliates, subsidiaries and assigns 315 W. 3rd Street Pittsburg, KS 66762.
2. All aforementioned policies shall contain a blanket waiver of subrogation in favor of Certificate Holder, and an additional insured endorsement naming Certificate Holder as Additional Insured (with the exception of Workers' Compensation and Employer's Liability). All aforementioned policies shall be primary and non-contributory with respect to any insurance carried by Railroad.
3. If any policies are purchased on a "claims made" basis, Licensee hereby agrees to maintain coverage in force for a minimum of three years and shall provide evidence of such coverage to Railroad, on an annual basis, during this additional three-year period.

### **Other Requirements**

1. All policies required shall be written by a reputable insurance company reasonably acceptable to Railroad or with a Best's Guide Rating of A- and Class VII or better and authorized to do business in the state(s) in which Licensee is conducting business.
2. Licensee shall notify Railroad in writing at least thirty (30) days prior to any cancellation, non-renewal, and substitution or material alteration to any of the aforementioned policies.
3. Failure to provide evidence as required shall entitle, but not require, Railroad to terminate immediately.
4. Acceptance of a certificate that does not comply with this document shall not operate as a waiver of Licensee's obligations hereunder.
5. Licensee is not allowed to have a self-insure greater than \$250,000 without prior written consent of Railroad. If granted by Railroad, any deductible, self-insured retention or other similar financial responsibility for claims shall be covered directly by Licensee in lieu of insurance. Any and all Licensee liabilities that would otherwise, in accordance with the provisions of this document, be covered by Licensee's insurance will be covered as if Licensee elected not to include a deductible, self-insured retention or other financial responsibility for claims.
6. If any portion of the operation is to be subcontracted by Licensee, Licensee shall require that the subcontractor shall provide and maintain insurance coverage as set forth herein, naming Railroad as an additional insured, and shall require that the subcontractor shall release, defend and indemnify Railroad to the same extent and under the same terms and conditions as Licensee is required to release, defend and indemnify Railroad herein.
7. Failure to provide evidence as required by this section shall entitle, but not require, Railroad to terminate this agreement immediately. Acceptance of a certificate that does not comply with this section shall not operate as a waiver of Licensee's obligations hereunder.
8. The fact that insurance (including, without limitation, self-insurance) is obtained by Licensee shall not be deemed to release or diminish the liability of Licensee including, without limitation, liability under the indemnity provisions of this License. Damages recoverable by Railroad shall not be limited by the amount of the required insurance coverage.

**KNWA WATCO  
RAILROAD PERMIT**



October 21, 2021

Mr. Isaac Fadiga  
**The Thrasher Group**  
300 Association Drive  
Charleston, WV 25311

**RE: Kanawha River Railroad, LLC**  
**License Agreement No. KNWA136**  
**For your client: City of Smithers Sanitary Board**  
**2 Greyhound Lane**  
**Smithers, WV 25186**

Dear Isaac:

The agreement for City of Smithers Sanitary Board's planned installation of a 36-inch steel pipeline containing 24-inch high density polyethylene storm sewer at 1164 feet north of Mile Post 213 and 499 feet south of the centerline of County Route 21/15 at or near Smithers, Fayette County, State of West Virginia on Kanawha River Railroad, LLC property can be released when we receive the following:

1. Railroad Protective Liability policy naming Watco Companies, LLC as the named insured,
2. Certificate of insurance from City of Smithers Sanitary Board,
3. Certificate of insurance from the identified contractor,
4. The agreement signed in duplicate original,
5. Payment of all fees,

Please let me know if you need any additional information.

If you have any questions or concerns, I can be reached (615) 810-0443 or [sstaggs@omegarail.com](mailto:ssstaggs@omegarail.com). As always, thank you for your assistance with these matters.

Yours truly,

Sheila Staggs  
Contract Administrator II

Enc.

CC: Kim A. Williams – ORM

Innovative Property Management Solutions





October 21, 2021

Mr. Isaac Fadiga  
**The Thrasher Group**  
300 Association Drive  
Charleston, WV 25311

**RE: Kanawha River Railroad, LLC**  
**License Agreement No. KNWA135**  
**For your client: City of Smithers Sanitary Board**  
**2 Greyhound Lane**  
**Smithers, WV 25186**

Dear Isaac:

The agreement for City of Smithers Sanitary Board's planned installation of a 16-inch steel pipeline containing an 8-inch polyvinyl chloride sanitary sewer at 1589 feet north of Mile Post 213 and 84 feet south of the centerline of County Route 21/15 at or near Smithers, Fayette County, State of West Virginia on Kanawha River Railroad, LLC property can be released when we receive the following:

1. Railroad Protective Liability policy naming Watco Companies, LLC as the named insured,
2. Certificate of insurance from City of Smithers Sanitary Board,
3. Certificate of insurance from the identified contractor,
4. The agreement signed in duplicate original,
5. Payment of all fees,

Please let me know if you need any additional information.

If you have any questions or concerns, I can be reached (615) 810-0443 or [sstags@omegarail.com](mailto:sstags@omegarail.com). As always, thank you for your assistance with these matters.

Yours truly,

Sheila Staggs  
Contract Administrator II

Enc.

CC: Kim A. Williams – ORM

Innovative Property Management Solutions

"General Decision Number: WV20210006 02/12/2021

Superseded General Decision Number: WV20200006

State: West Virginia

Construction Type: Building

County: Fayette County in West Virginia.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.95 for calendar year 2021 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.95 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2021. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/01/2021
1	02/12/2021
2	02/12/2021

ASBE0080-002 03/09/2020

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 32.40	26.37

BOIL0667-005 03/01/2018

	Rates	Fringes
BOILERMAKER.....	\$ 39.38	23.77

BRWV0009-006 12/01/2019

	Rates	Fringes
BRICKLAYER Bricklayer & Brick Pointer/Caulker/Cleaner.....	\$ 29.93	24.38

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BRWV0015-010 06/01/2020

	Rates	Fringes
MASON - STONE.....	\$ 29.75	23.64

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CARP0439-003 12/01/2020

	Rates	Fringes
CARPENTER (Including Drywall Hanging, Form Work, Scaffold Builder and Floor Laying - Carpet, Hardwood, Resilient and Vinyl).....	\$ 30.03	23.65

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CARP0443-009 12/01/2019

	Rates	Fringes
MILLWRIGHT.....	\$ 34.75	24.05

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ELEC0466-008 06/01/2020

	Rates	Fringes
ELECTRICIAN.....	\$ 37.86	20.99

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ENGI0132-008 12/01/2018

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
GROUP 1.....	\$ 39.56	19.20
GROUP 2.....	\$ 39.21	19.20
GROUP 3.....	\$ 38.21	19.20
GROUP 4.....	\$ 27.71	19.20

GROUP 1: All Friction Cranes, Tower Cranes and all Cranes with 180 ft. or more of boom including mast and jibs or lifting capacity of 100 tons or more and hoists with 30,000 pound line pull or more

GROUP 2: Operating Cranes and Tower Cranes with a lifting capacity of 15 tons and ove

GROUP 3: Backhoe, Excavator, all other Cranes

GROUP 4: Bobcat/Skid Steer/Skid Loader, Roller, Oiler

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IRON0549-006 12/01/2020

	Rates	Fringes
IRONWORKER (Ornamental).....	\$ 34.03	23.22

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IRON0787-006 12/01/2020

	Rates	Fringes
IRONWORKER (Reinforcing).....	\$ 30.88	22.85

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LAB00379-019 12/01/2020

	Rates	Fringes
LABORER		
Wacker Roller Operator.....	\$ 26.32	16.50
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LAB00453-003 12/01/2017		

	Rates	Fringes
LABORER		
Concrete Saw (Hand Held/Walk Behind).....	\$ 22.76	16.75
Grouting.....	\$ 22.11	17.25
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\* LAB00543-003 06/01/2020

	Rates	Fringes
LABORER.....	\$ 25.41	16.75

LABORER CLASSIFICATIONS

Asphalt Raker, Jack Hammer, Motorized Buggy Operator, Water Boy

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LAB00984-005 12/01/2020

	Rates	Fringes
LABORER		
Group 2.....	\$ 21.94	15.75

LABORER CLASSIFICATIONS

GROUP 2: Airtool Operator, Asbestos Abatement (Removal from Floors, Walls, and Ceiling), Bobcat Operator (Clean up/Demolition), Dewatering, Rodman, Skytrak Forklift Operator

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LAB01353-004 12/01/2020

	Rates	Fringes
LABORER		
Carpenter Tender.....	\$ 24.78	17.25
Common or General.....	\$ 24.16	17.25
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PAIN0970-007 12/01/2020

	Rates	Fringes
PAINTER (Drywall Finishing/Taping).....	\$ 29.35	17.10
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PAIN1195-002 06/01/2020

	Rates	Fringes
GLAZIER.....	\$ 31.50	12.59
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PLAS0926-009 06/01/2018

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 31.63	21.26
PLASTERER.....	\$ 30.06	18.43

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 \* UAVG-WV-0003 01/01/2019

	Rates	Fringes
LABORER (Chipping Guns).....	\$ 24.78	16.25
LABORER (Concrete Worker).....	\$ 23.57	16.17
LABORER (Grade Checker).....	\$ 22.70	16.11
LABORER (Landscape).....	\$ 22.99	16.35
LABORER (Mortar Mixing).....	\$ 23.35	16.06
LABORER (Pipelayer).....	\$ 24.06	16.31
LABORER (Scaffold Builder).....	\$ 23.63	16.12
LABORER (Tamper- Hand Held).....	\$ 23.33	16.04

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 \* UAVG-WV-0028 01/01/2019

	Rates	Fringes
PLUMBER.....	\$ 32.54	24.58

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 SUWV2012-004 08/13/2012

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 32.83	3.00
IRONWORKER, STRUCTURAL.....	\$ 36.17	3.00
LABORER: Demolition.....	\$ 20.58	9.47
LABORER: Mason Tender - Brick...	\$ 27.55	3.00
LABORER: Mason Tender - Cement/Concrete.....	\$ 22.05	8.54
OPERATOR: Bulldozer.....	\$ 30.24	10.26
OPERATOR: Forklift.....	\$ 33.09	3.00
PAINTER: Brush, Roller and Spray.....	\$ 28.55	3.00
PIPEFITTER, Includes HVAC Pipe Installation.....	\$ 27.64	18.09
ROOFER.....	\$ 24.28	9.32
SHEET METAL WORKER, Includes HVAC Duct Installation.....	\$ 25.61	15.68
Truck Driver: Single and Double Axle Dump Trucks.....	\$ 28.52	3.00

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 WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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 Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the

Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates

the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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#### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator

U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"



"General Decision Number: WV20210061 02/12/2021

Superseded General Decision Number: WV20200061

State: West Virginia

Construction Type: Heavy

Counties: Barbour, Braxton, Calhoun, Fayette, Gilmer, Greenbrier, Jackson, Lewis, Mason, McDowell, Mingo, Monroe, Nicholas, Pendleton, Pocahontas, Randolph, Ritchie, Roane, Summers, Tucker, Upshur, Webster and Wyoming Counties in West Virginia.

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.95 for calendar year 2021 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.95 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2021. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/01/2021
1	02/12/2021

CARP0443-008 12/01/2019

	Rates	Fringes
MILLWRIGHT.....	\$ 34.75	24.05

ELEC0307-008 06/01/2020

	Rates	Fringes
ELECTRICIAN.....	\$ 34.90	18.15

ENGI0132-014 12/01/2018

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
GROUP 1.....	\$ 35.95	18.60
GROUP 2.....	\$ 33.19	18.60

GROUP 3.....	\$ 32.08	18.60
GROUP 4.....	\$ 28.62	18.60

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Cranes (All types), Boom trucks, Loaders of six (6) cubic yard capacity and over, Excavators and shovels with an operating weight of one hundred ten thousand (110,000) pounds and over.

GROUP 2: Loaders up to six (6) cubic yard capacity, Backhoe, Bulldozers, Bobcat/Skid Steer/Skid Loader, Forklift, Drill, Excavators and shovels with an operating weight of up to one hundred ten thousand (110,000) pounds

GROUP 3: Roller.

GROUP 4: Oiler

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 ENGI0132-027 12/01/2018

	Rates	Fringes
POWER EQUIPMENT OPERATOR: (PIPELINE)		
GROUP 1.....	\$ 35.95	18.60
GROUP 2.....	\$ 33.19	18.60

POWER EQUIPMENT OPERATOR PIPELINE CLASSIFICATIONS

GROUP 1: Boom, Bulldozer, Excavator, Mechanic, Pipe Bending Machine

GROUP 2: Oiler.

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 ENGI0132-029 12/01/2018

	Rates	Fringes
POWER EQUIPMENT OPERATOR: Single and Double Axle Dump Trucks.....	\$ 33.19	18.60

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 IRON0549-011 12/01/2020

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 34.03	23.22

-----  
 IRON0568-020 12/01/2020

	Rates	Fringes
IRONWORKER, REINFORCING AND STRUCTURAL.....	\$ 33.70	22.04

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 \* LABO0379-040 12/01/2020

	Rates	Fringes
LABORER: (PIPELINE).....	\$ 25.26	16.50

LABORER CLASSIFICATIONS:

Chain Saw, Common, Flagger, Landscape, Pipelayer, Sandblaster

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LAB00379-043 12/01/2020

	Rates	Fringes
LABORER:		
GROUP 1.....	\$ 27.35	16.50
GROUP 2.....	\$ 26.32	16.50
GROUP 3.....	\$ 25.26	16.50

GROUP 1: Tunnel Driller, Tunnel Miner.

GROUP 2: Air Tool Operator, Chain Saw, Compactor (Dirt) Hand Held, Concrete Worker, Hand Held Drill, Form Work Only, Grade Checker, Grouting, Pipelayer, Skytrak Forklift Operator, Tamper (Hand Held), Wacker Roller Operator.

GROUP 3: Carpenter Tender, Common or General, Flagger, Landscape

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PLAS0926-001 06/01/2018

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 31.63	21.26

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\* UAVG-WV-0010 01/01/2019

	Rates	Fringes
LABORER (Mason Tender - Cement/Concrete).....	\$ 26.17	16.50

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\* UAVG-WV-0012 01/01/2019

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Mechanic).....	\$ 35.45	18.30

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information

on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

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WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
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Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
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U.S. Department of Labor  
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Washington, DC 20210

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Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

"General Decision Number: WV20210080 01/01/2021

Superseded General Decision Number: WV20200080

State: West Virginia

Construction Type: Highway

Counties: West Virginia Statewide.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.95 for calendar year 2021 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.95 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2021. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Modification Number	Publication Date
0	01/01/2021

SUWV2015-001 01/01/2014

Rates	Fringes
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BRICKLAYER

Barbour, Berkeley,  
Doddridge, Gilmer, Grant,  
Hampshire, Hardy,  
Harrison, Jefferson,  
Lewis, Marion, Mineral,  
Monongalia, Morgan,  
Pendleton, Pocahontas,

Preston, Randolph, Taylor, Tucker, Upshur, Webster.....	\$ 30.74	18.21
Boone, Braxton, Clay, Fayette, Greenbrier, Kanawha, Logan, McDowell, Mercer, Monroe, Nicholas, Putnam, Raleigh, Summers, Wyoming.....	\$ 29.66	20.20
Brooke, Hancock.....	\$ 29.94	16.22
Cabell, Lincoln, Mason, Mingo, Wayne.....	\$ 30.61	20.88
Calhoun, Jackson, Pleasants, Ritchie, Roane, Wirt, Wood.....	\$ 30.33	15.27
Marshall, Ohio, Tyler, Wetzel.....	\$ 30.01	16.26

CARPENTER

Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Morgan, Pendleton.....	\$ 31.26	15.90
Brooke, Hancock, Marshall, Ohio.....	\$ 27.86	19.30
Remaining Counties.....	\$ 27.72	19.44

CEMENT MASON/CONCRETE FINISHER

All Counties.....	\$ 28.67	18.85
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DIVER

Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Morgan, Pendleton Diver Tender.....	\$ 31.26	15.90
Diver.....	\$ 32.25	15.90
Brooke, Hancock, Marshall, Monongalia, Ohio, Wetzel Diver Tender.....	\$ 32.01	16.76
Diver.....	\$ 48.02	16.76
Remaining Counties Diver Tender.....	\$ 27.72	19.44
Diver.....	\$ 28.27	19.44

ELECTRICIAN (SIGNAL &  
LIGHTING)

Equipment Operator.....	\$ 23.30	17.99
Flagger.....	\$ 17.00	7.39
Groundman/Truck Driver.....	\$ 20.79	17.89
Installer.....	\$ 26.21	18.11
Technician.....	\$ 29.12	18.22

ELECTRICIAN

Barbour, Doddridge, Harrison, Lewis, Marion, Monongalia, Pendleton, Pocahontas, Preston, Randolph, Taylor, Tucker, Upshur.....	\$ 30.14	21.14
Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Morgan..	\$ 30.50	15.78
Boone, Braxton, Calhoun, Clay, Fayette, Gilmer, Kanawha, Nicholas, Putnam,		



Raleigh, Roane, Summers, Webster, Wyoming.....\$ 35.34	16.62
Brooke, Marshall, Ohio, Wetzel.....\$ 28.35	22.74
Cabell, Lincoln, Logan, Mason, Mingo, Wayne.....\$ 32.62	21.70
Greenbrier, McDowell, Mercer, Monroe.....\$ 25.05	16.32
Hancock.....\$ 34.00	29.10
Jackson, Pleasants, Ritchie, Tyler, Wirt, Wood..\$ 31.56	21.43

IRONWORKER

Barbour, Brooke, Hancock, Harrison, Marion, Marshall, Monongalia, Ohio, Taylor, Tyler, Wetzel.\$ 35.74	22.84
Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Morgan, Pendleton, Preston, Tucker.....\$ 33.29	17.39
Boone, Braxton, Clay, Fayette, Kanawha, Lincoln, Logan, McDowell, Mingo, Nicholas, Putnam, Raleigh, Randolph, Webster, Wyoming..\$ 34.87	19.50
Cabell, Wayne.....\$ 33.89	21.98
Calhoun, Doddridge, Gilmer, Jackson, Lewis, Mason, Pleasants, Ritchie, Roane, Upshur, Wirt, Wood...\$ 33.02	20.10
Greenbrier, Mercer, Monroe, Pocahontas, Summers.\$ 35.43	16.13

LABORER

Class 1.....\$ 26.95	16.30
Class 2.....\$ 25.92	16.30
Class 3.....\$ 24.86	16.30

LABORER CLASSIFICATIONS:

GROUP 1: Powderman, Laser Screed Operator, and GPS Operator.

GROUP 2: Pipelayer (Including Laser Beam Set Up), Form Setter (Road), Drill Operator, Air Tool Operator, Grade Checker and Asphalt Raker, Vibrator Man, Whacker, Chainsaw Operator, Mortarman, Brick Mason Tender, Cement Finisher Tender, Drill Tender, Powderman Tender, Water Proofer, Sheeter & Shorer, Placement of Lagging, Pipelayer Tender, Bull-Float Man, Pavement Reinforcing Placer, Handyman, Signal Man, Greencutter, Georgia Power Buggie, Burner, Cement Blower Man, Bituminous Hand Sprayer, Bork 250 Remote Control Ditch Witch and Walk Behind Concrete Saw, Mulcher and Seeder (hand and machine), Installation of Ground Mounted Beams and Signs including Concrete Footers, Installation of Overhead Sign Supports and Signs including Concrete Footers, Installation of Guardrail and Anchors Assemblies, Tree Trimmer, Caisson Bottom Man, Bush Hammering, Core Drilling, Placement and Mixing of Grout and Bridge Demolition Specialist.\*\*

GROUP 3: Flag Person, Traffic Control Maintenance Person, Carpenter's Tender, and General Laborer.

PAINTER

Barbour, Berkeley,

Doddridge, Gilmer, Grant, Hampshire, Hardy, Harrison, Jefferson, Lewis, Marion, Mineral, Monongalia, Morgan, Pendleton, Preston, Randolph, Taylor, Tucker, Upshur, Webster.....	\$ 31.87	14.20
Boone, Braxton, Cabell, Calhoun, Clay, Fayette, Greenbrier, Kanawha, Lincoln, Logan, Mason, McDowell, Mercer, Mingo, Monroe, Nicholas, Pocahontas, Putnam, Raleigh, Summers, Wayne, Wyoming.....	\$ 32.05	14.30
Brooke, Hancock, Marshall, Ohio, Wetzel.....	\$ 30.95	14.36
Jackson, Pleasants, Ritchie, Roane, Tyler, Wirt, Wood.....	\$ 30.84	14.30

PILEDRIVERMAN

Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Morgan, Pendleton.....	\$ 32.25	15.90
Brooke, Hancock, Marshall, Monongalia, Ohio, Wetzel....	\$ 32.01	16.76
Remaining Counties.....	\$ 28.27	19.44

POWER EQUIPMENT OPERATOR:

Class 1.....	\$ 33.25	18.60
Class 2.....	\$ 30.49	18.60
Class 3.....	\$ 29.38	18.60
Class 4.....	\$ 25.92	18.60
Class 5A.....	\$ 26.04	18.60
Class 5B.....	\$ 28.64	18.60
Class 5C.....	\$ 26.94	18.60

POWER EQUIPMENT OPERATOR CLASSIFICATIONS:

GROUP 1: Cranes, tower cranes, derricks, derrick boats, draglines, clamshells, cableways, boom truck, loaders of 6 cubic yard capacity and over, excavators and shovels with an operating weight of 110,000 pounds and over.

GROUP 2: Loaders up to 6 cubic yard capacity, gradall, hoist 2 drums or more, mixer plant (2 or more mixers including batch control), pile driver operator, core drill, trencher, backhoe, asphalt paver, cement paver, rotary drill, bulldozers, concrete pump, controlled fine grade machine, slip form paver, log loader, log skidder, motor grader, rubber tired scraper, tractor pan, Roto Miller, tow or work boat, mobile conveyor, transloader, articulating equipment, material hauler, carry deck, compactor with blade, skidsteer including attachments, fork lift, self-propelled concrete spreader, concrete finishing machine, derrick (single drum), hoist (single drum), single drum paver, air tugger, Ross Carrier, multiple concrete saw, hydraulic post driver, horizontal road-boring machine, tie distributor, track lining machine, ballast tamper, anchor application machine, ribbon rail puller, ballast regulator, auto sled, turn table, pavement breaker, asphalt batch plant, concrete batch plant, crushing plant, compactor with blade, power broom, vac-all truck, self-propelled concrete spreader

and concrete finishing machine, mechanics with tools and greasers, excavators, and shovels with an operating weight of up to 110,000 pounds.

GROUP 3: Asphalt roller

GROUP 4: Air compressor, concrete mixer (under 1 cubic yard), light plant, mechanic's tender, assistant engineer, screedman, spreader box man, joint sealer and pump, steam jenny, stationary conveyor (belt or bucket), A-frame, tire man, screening and washing plant, form sub-grader, power form handling equipment, burlap and curing machine, form grader, bull float, bar and joint installing machine, roller and compactor, hydroblaster, concrete mixer (single drum, 1 cu. yd. or over), portable concrete saw and highway striping operator. Utility operators shall be paid Group 2 rate when operating 1 to 5 air compressors, pumps, stationary conveyors (belt or bucket), light plants, and gasoline or diesel powered welders and all farm type tractors.

GROUP 5A: Those operating off-road trucks in the following counties: Barbour, Braxton, Boone, Calhoun, Clay, Doddridge, Fayette, Gilmer, Greenbrier, Harrison, Jackson, Kanawha, Lewis, Marion, Mercer, McDowell, Monongalia, Monroe, Nicholas, Pleasants, Pocohontas, Preston, Putnam, Raleigh, Randolph, Roane, Ritchie, Summers, Taylor, Tucker, Tyler, Upshur, Webster, Wirt, Wood, and Wyoming.

GROUP 5B: Those operating off-road trucks in the following counties: Cabell, Lincoln, Logan, Mason, Mingo, and Wayne.

GROUP 5C: Those operating off-road trucks in the following counties: Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Morgan and Pendleton.

FOOTNOTE: \$2.00 per hour shall be added to the Group 1 rate for individuals operating a lattice boom crane with a fixed boom of 150 feet or more. \$0.25 per hour shall be added to all of the above schedules for underground work.

TRUCK DRIVER

Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Morgan, Pendleton		
Class 1.....	\$ 25.72	18.11
Class 2.....	\$ 26.61	18.11
Class 3.....	\$ 27.38	18.11
Brooke, Hancock		
Class 1.....	\$ 29.17	13.86
Class 2.....	\$ 30.92	13.86
Class 3.....	\$ 31.71	13.86
Cabell, Lincoln, Logan, Mason, Mingo, Wayne		
Class 1.....	\$ 29.79	15.60
Class 2.....	\$ 30.76	15.60
Class 3.....	\$ 31.55	15.60
Marshall, Ohio, Wetzel		
Class 1.....	\$ 26.26	16.81
Class 2.....	\$ 27.16	16.81
Class 3.....	\$ 27.76	16.81
Remaining Counties		
Class 1.....	\$ 26.97	16.15
Class 2.....	\$ 27.76	16.15
Class 3.....	\$ 28.44	16.15

TRUCK DRIVER CLASSIFICATIONS:

GROUP 1: Single Axle Trucks used as Dumps, Supply, Fuel, Water, Van, Flatbody, Monorail, Distributor (other than Bituminous Distributors) including Towed Single Units, Material Checkers and Receivers, Greasers, Tireman and Mechanic Tenders (Trucks), Warehouse, Yardmen and Pick-up trucks.

GROUP 2: Tandem and Tri-Axle Trucks used as Dumps, Supply, Fuel, Water, Van, Flatbody, Monorail and including Towed Single Units, Truck Tractors used in combination with Dump, Van, Tank, Flatbed, Low platform or Pole Trailers, Bituminous Distributors, Agitator or Mixer Trucks (up to 20 cubic-yards), Rubber-tired tractors (towing and pushing), Drag and Tag-alongs.

GROUP 3: Mobile Metered Mixer, Agitator or Mixer Trucks (over 20 cubic yards), & Mechanic Truck.

A. Double Hitch equipment operated by 1 driver shall pay 50% more than the wages set out above.

B. \$0.25 per hour shall be added for tunneling and all other underground work.

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local),

a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

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