

**BERKELEY COUNTY PUBLIC SERVICE SEWER DISTRICT
BERKELEY COUNTY, WEST VIRGINIA**

CONTRACT NO. 7 – TIMBERWALK SANITARY SEWER EXTENSION

MARCH 12, 2020

ADDENDUM NO. 1

To whom it may concern:

A. BOILER PLATE

1. Bid Opening will be on March 18, 2020 at 10:00 a.m. at the Berkeley County Public Service Sewer District Office, 65 District Way, Martinsburg, WV 25404.
2. The Bid Form has been revised to modify the quantities. The revised Bid Form is included with this Addendum No. 1. **YOU MUST USE THE ATTACHED BID FORM INCLUDED WITH THIS ADDENDUM NO. 1 WHEN PREPARING YOUR BID PACKAGE.**
3. Updated Wage Rates are included with this Addendum No. 1. **YOU MUST USE THE ATTACHED WAGE RATES INCLUDED WITH THIS ADDENDUM NO. 1 WHEN PREPARING YOUR BID PACKAGE.**

B. SPECIFICATIONS

1. **REPLACE** Section 012000 – PRICE AND PAYMENT PROCEDURES, included with this Addendum No. 1.
2. **REPLACE** Section 333216 – ABOVE GROUND VALVE PACKAGE PUMP STATION WITH SUBMERSIBLE GRINDER PUMPS, included with this Addendum No. 1.

C. DRAWINGS

1. **REPLACE** Sheet 3, included with this Addendum No. 1.
2. **REPLACE** Sheet PS-2, included with this Addendum No. 1.
3. **REPLACE** Sheet PS-3, included with this Addendum No. 1.

D. QUESTIONS AND CLARIFICATIONS

The following are clarifications and responses to questions posed by Contractors and suppliers regarding the above referenced project.

1. Question:

How long is the Bid Hold period?

Answer:

There is a 90 day Bid Hold required by the Contract Documents.

2. Question:

Is blasting allowed?

Answer:

Yes, blasting would be permitted in accordance with Specification Section 312000 – EARTH MOVING on Line 3 from Manhole 3-9 to the Timberwalk Pump Station as shown on the Drawings. Blasting outside this area is not permitted.

3. Question:

Is the Contractor Tax Exempt for purchasing materials?

Answer:

Yes, the Contractor may use the Owner's Tax Exemption for the purchase of materials only.

4. Question:

Are there AIS requirements?

Answer:

Yes, the project is funded by the West Virginia Department of Environmental Protection (WV DEP) Clean Water State Revolving Fund (CWSRF) which requires AIS Certification.

5. **Question:**

Is the wet well 4-foot or 5-foot diameter? There are conflicting notes about this on the Drawings.

Answer:

The wet well is 5-foot inner diameter. Refer to the revised Sheet PS-2 included with this Addendum No. 1.

6. **Question:**

The forcemain line goes through a concrete driveway and there does not appear to be a bid item for this. Is this inclusive in the project?

Answer:

Yes, this is inclusive in the project. Refer to the revised Sheet 3 included with this Addendum No. 1. The Bid Form Section C-410 and Specification Section 012000 – PRICE AND PAYMENT PROCEDURES have been revised to modify the quantities and is included with this Addendum No. 1.

7. **Question:**

How soon will the Notice to Proceed be issued?

Answer:

The Notice to Proceed will be issued within 90 days of the Bid Hold.

8. **Question:**

Who is the pump supplier that was in coordination with this project?

Answer:

Mark Place – John P. Place, Inc. Cell: (412) 877-0050. Refer to Paragraph 2.5.A of revised Specification Section 333216 – ABOVE GROUND VALVE PACKAGE PUMP STATION WITH SUBMERSIBLE GRINDER PUMPS for more details.

9. **Question:**

With regard to manhole castings, the bid items call for use of standard manhole frames and covers while the detail calls out watertight frames and covers. Should we be bidding this project with standard or watertight castings?

Answer:

Standard manhole frames and covers shall be provided per Specification Section 330513 – MANHOLES AND STRUCTURES.

10. **Question:**

The valve schedule calls out 4” valves, the drawings and specifications are based on 2” check and isolation valves.

Answer:

The valve schedule has been revised to match the 2” valves that are called for on the Drawings and Specifications. Refer to revised Sheet PS-2 included with this Addendum No. 1.

11. **Question:**

The 8” influent line would be better with a drop inlet or a stainless steel U shaped baffle to avoid “high” flows creating entrained air.

Answer:

The 8” influent line shall be installed as shown on the Drawings

12. **Question:**

Paragraph 2.4.G of Specification Section 333216 – ABOVE GROUND VALVE PACKAGE PUMP STATION WITH SUBMERSIBLE GRINDER PUMPS, in the past, the field crews have stated that they do not want a hoist and socket and that they are piling up at the shop.

Answer:

Paragraph 2.4.G of Specification Section 333216 – ABOVE GROUND VALVE PACKAGE PUMP STATION WITH SUBMERSIBLE GRINDER PUMPS has been removed. Refer to the revised specification and the revised Sheet PS-3 included with this Addendum No. 1.

13. **Question:**

Could the minimum cable length be changed to 35’ in Specification Section 333216 – ABOVE GROUND VALVE PACKAGE PUMP STATION WITH SUBMERSIBLE GRINDER PUMPS?

Answer:

Paragraph 2.5.D of Specification Section 333216 – ABOVE GROUND VALVE PACKAGE PUMP STATION WITH SUBMERSIBLE GRINDER PUMPS has been revised to include a minimum cable length of 35’ for the multi-conductor power cord.

14. **Question:**

In previous projects, it has been specified to supply 5/16” lifting chains for the pumps. In the past, the field crews have asked for either a rigid lifting bail and cable, or a rigid lifting bail and a combination chain and lifting cable assembly for flexibility. What should be supplied with this project?

Answer:

Paragraph 2.5.M of Specification Section 333216 – ABOVE GROUND VALVE PACKAGE PUMP STATION WITH SUBMERSIBLE GRINDER PUMPS states stainless steel lifting cables shall be supplied with the pumps.

15. **Question:**

The level control system specified is a bubbler based system with a redundant high water alarm float. Can the bubbler air bell and support detail, along with the chain and anchor for the redundant float be included in the Drawings?

Answer:

Refer to Section 2.10 of revised Specification Section 333216 – ABOVE GROUND VALVE PACKAGE PUMP STATION WITH SUBMERSIBLE GRINDER PUMPS, included with this Addendum No. 1.

E. GENERAL

1. Pre-Bid Meeting Minutes and Sign-In Sheet from the Pre-Bid Conference are included with this Addendum No. 1.
2. B&O Taxes are NOT required for this project.
3. There are no permits associated with this project.
4. Construction efforts are limited to normal business working hours of 8:00 a.m. to 5:00 p.m., Monday through Friday, unless otherwise indicated per the Summary Specification 011000.
5. The Engineer's cost estimate for this project is \$1,140,000.00.
6. Bidders are hereby notified to acknowledge receipt of all addenda in space provided on the Bid Form.

If you have any questions or need any other information, please do not hesitate to contact me.

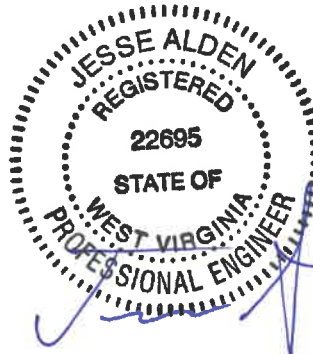
Sincerely,

THE THRASHER GROUP, INC.



Jesse Alden, P.E.
Project Manager

Enclosures



3-11-2020

**BERKELEY COUNTY PUBLIC SERVICE SEWER DISTRICT
BERKELEY COUNTY, WEST VIRGINIA**

CONTRACT #7 – TIMBERWALK SANITARY SEWER EXTENSION

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

PRE-BID CONFERENCE AGENDA

MARCH 3, 2020

PROJECT LOCATION: Berkeley County, West Virginia

ENGINEER'S PROJECT #: 101-020-1533

DATE OF CONFERENCE: March 3, 2020 at 2:00 PM

CONFERENCE LOCATION: Berkeley County PSSD
65 District Way
Martinsburg, WV 25404

PRE-BID AGENDA

- I. Introductions – **Berkeley County PSSD: Curtis Keller (General Manager), John Wood (Construction Manager), Rodney Hanes (Operations Manager).**
- Engineer: Jenelle Armstrong (Design Engineer), Scott Pacifico (Resident Project Representative).**

II. General Project Description

- a. Contract #7 – Timberwalk Sanitary Sewer Extension

The project consists of the following:

- i. **Installation of approximately 5,450 LF of 8” PVC SDR-35 Gravity Sewer Line; 680 LF of 4” PVC SDR-35 Service Lateral Pipe; 265 LF of 2” PVC SDR-21 Class-200 Forcemain; 20 EA of 48” Diameter Manholes w/ Standard Frame and Covers, 28 VF of 48” Diameter Manhole Riser Sections; 10 EA Cleanouts; 44 EA of PVC Wye Connections; 3 EA of Connections of New Sewer to Existing Manholes; 50 LF of WVDOH Type “B” Trench; 450 LF of Asphalt Driveway Repair; 5,020 LF of Reclamation of Disturbed Area; 1 LS for Timberwalk Pump Station; and all necessary appurtenances to complete the Work.**

III. General Bidding Information

- a. General

i. **Contract #7**

- 1. Bid opening will be on March 18, 2020**
- 2. Time - 10:00 AM**
- 3. Location: (Same Location as Pre-Bid) 65 District Way,
Martinsburg, WV 25404**

- ii. **Two Envelope System – All BOR (blue) in 1st envelope, and BID Form (Yellow) in other.**

1. Envelope 1

- a. Name & address of Bidder**
- b. Bid for Contract #7**
- c. Project Owner name – Berkeley County Public Service Sewer District**

2. Envelope 2

a. Placed in Envelope 1

b. Labeled “Bid Proposal”

iii. Contract Time

a. Contract #7

i. Substantial Completion - 270 days

ii. Final Completion - 300 days

iii. Liquidated Damages - \$1,000/day

b. Bid Opening Requirements - Blue Pages – Labeled BOR

i. Submitted on Time

ii. Bid Bond – 5% total Bid (ORIGINAL)

iii. Certification of Non-Segregated Facilities

iv. EEO Certification

v. Certification of receipt of all Addenda

vi. Drug Free Workplace

vii. Copy of Current Contractor’s License

c. Bid Form - Yellow Pages – Section 410

i. Contract #7

1. 15 Unit Price Base Bid Items

d. Method of Award – Lowest Responsive Responsible Bidder – Base Bids. A

Notice to Proceed will be issued within 30 days after the Effective Date of the Contract per the General Conditions (EJCDC C-700).

IV. Details of Project

a. Construction Sequence of Events – As Described in the Summary Section

011000.

b. **Material and Equipment - As Described in the Plans/Specs. “Or Equal” items will be reviewed during the submittal process as described in Section 012500 “Substitution Procedures” and 013300 “Submittal Requirements”.**

c. **Other Miscellaneous Items**

i. **Project Estimates:**

1. **Contract #7 - \$1.14 Million**

ii. **An Updated Plan Holder’s list will be issued upon request.**

V. **Permits**

a. **There are no permits associated with this project.**

VI. **B & O Taxes/Building Permits**

a. **B&O Taxes DO NOT apply to this Project. There are no Building Permits associated with this project.**

VII. **Geotechnical Report**

a. **A Geotechnical report was not prepared for this Project. The project area mainly consists of Rock.**

VIII. **Office Trailer and Equipment and Storage Area**

a. **Locations for the Office Trailer, Equipment and Storage Area must be coordinated with the Engineer and Owner. The area shall be included in the Pre-Construction Videos – must be set up prior to 1st pay. Will include bathroom, phone, internet, fax, etc.**

IX. **Addressing Questions**

a. **All in Writing – Fax Only 304-343-7604 Attn: Jenelle Armstrong –**

**Reference Berkeley Public Service Sewer District – Contract #7, Please
Reference Sheet # and Specification Section for all questions.**

- X. Addendum
 - a. **Last Day for Questions will be COB Wednesday, March 11, 2020 –
Addendum will be overnighted to all plan holders on Friday, March 13, 2020.**
- XI. Funding Agencies – **This project is funded by the WV DEP CWSRF**
- XII. Owner – Berkeley County Public Service Sewer District
- XIII. Question and Answer Session

BERKELEY COUNTY PUBLIC SERVICE SEWER DISTRICT
BERKELEY COUNTY, WEST VIRGINIA

CONTRACT #7 - TIMBERWALK SANITARY SEWER EXTENSION PROJECT

PRE-BID CONFERENCE
2:00 PM
March 3, 2020

NAME	REPRESENTING	E-MAIL ADDRESS/PHONE/FAX	CONTRACTS BIDDING
CLAUDE FINNEY PRODIGE	H&W Construction	claud.featkens@grup	7
LARRY TROTTA	SES	TROTTA@SAS/AREN/VS.COM	7
Ted Winters	W-L Construction & Paving, Inc.	TWINTER@W-LCONSTRUCTION.COM	7
Chris Galick	Dim Contractors, Inc.	cgalik@dimcontractorsinc.com	#17
Tim Bulford	Garney Construction	estimating@MACgarney.com	7
Peter Hutchins	Ferguson Waterworks	Peter.hutchins@ferguson.com	7
Erik VanDoren	Harbor Pipeline	erik@mendocinopipeline.com	7
Bryan Bais	Mendon Pipeline Inc	Bryan@mendonpipeline.com	7
Kevin Johnson	Jefferson Asphalt	kyke@lvb.com	7
Scott Pacifico	THRASHER		
JENNIFER ARMSTRONG	THRASHER		
JOHN WOOD	BCPSSD	ewood@bcpsd.com	
Curtis Keller	BCPSSD	cbkellor@bcpsd.com	
Jason Dastley	Cox and Mann	jason.dastley@coxandmann.com	7

**BERKELEY COUNTY PUBLIC SERVICE SEWER DISTRICT
BERKELEY COUNTY, WEST VIRGINIA**

**CONTRACT #7: TIMBERWALK SANITARY SEWER EXTENSION PROJECT
THRASHER PROJECT #101-020-1533**

BID FORM

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

*Berkeley County Public Service Sewer District
65 District Way
Martinsburg, WV 25404*

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 Rocky Fork Sanitary Sewer Extension. The Project "Construction Sequence of Events" has been detailed in the Drawings and Specifications Division 01, Section 011000, Summary.

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

CONTRACT #7: TIMBERWALK SANITARY SEWER EXTENSION PROJECT

FOR THE

**BERKELEY COUNTY PUBLIC SERVICE SEWER DISTRICT
BERKELEY COUNTY, WEST VIRGINIA**

BID SCHEDULE

NOTE: 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	_____
2	1 LS	Pre-Construction Video of Project Area		
			_____ Dollars	
			_____ Cents	_____

Description		with Unit Price Written	Unit Price	Total Price
Item	Quantity			
3	1 LS	Erosion and Sediment Control		
		_____ Dollars		
		_____ Cents	_____	_____
4	5,450 LF	8" PVC SDR-35 Gravity Sewer Line		
		_____ Dollars		
		_____ Cents	_____	_____
5	680 LF	4" PVC SDR-35 Service Lateral Pipe		
		_____ Dollars		
		_____ Cents	_____	_____
6	265 LF	2" PVC SDR-21 CL-200 Forcemain		
		_____ Dollars		
		_____ Cents	_____	_____
7	20 EA	48" Diameter Manhole Base, Cone Top, Regular Casting With Standard Frame/Cover		
		_____ Dollars		
		_____ Cents	_____	_____
8	28 VF	48" Diameter Manhole Riser Pipe		
		_____ Dollars		
		_____ Cents	_____	_____
9	10 EA	Gravity Terminal Line Cleanout		
		_____ Dollars		
		_____ Cents	_____	_____

Item	Quantity	Description with Unit Price Written	Unit Price	Total Price
10	44 EA	PVC Wye Connection		
		_____ Dollars		
		_____ Cents	_____	_____
11	3 EA	Connection of New Sewer to Existing Manhole		
		_____ Dollars		
		_____ Cents	_____	_____
12	50 LF	WVDOH Type "B" Trench Repair		
		_____ Dollars		
		_____ Cents	_____	_____
13	450 LF	Asphalt Driveway Repair		
		_____ Dollars		
		_____ Cents	_____	_____
14	25 LF	Concrete Driveway Repair		
		_____ Dollars		
		_____ Cents	_____	_____
15	5,020 LF	Reclamation of Disturbed Area		
		_____ Dollars		
		_____ Cents	_____	_____
16	1 LS	Timberwalk Pump Station		
		_____ 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)

NOTE TO USER: Use in those states or other jurisdictions where applicable or required.

SECTION 012000 - PRICE AND PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Schedule of Values.
- B. Application for Payment.
- C. Change procedures.
- D. Defect assessment.
- E. Measurement and Payment.
- F. Unit prices.
- G. Alternates.

1.2 SCHEDULE OF VALUES

- A. Submit printed schedule on Progress Estimate schedule on EJCDC C-620 or Contractor's standard form or electronic media printout will be considered for this use.
- B. Submit Schedule of Values in duplicate within 20 days after date established in Notice to Proceed.
- C. Format: Use Table of Contents of this Project Manual. Identify each line item with number and title of major Specification Section. Also identify Site mobilization, bonds and insurance, and demobilization.
- D. Include within each line item, direct proportional amount of Contractor's overhead and profit.
- E. Revise schedule to list approved Change Orders with each Application for 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 with each Application for Payment.
- D. Payment Period: Submit at intervals stipulated in the Agreement.
- E. Submit Application for Payment 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 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 Change Directive. Changes in Contract Sum/Price or Contract Time will be computed as specified for Time and Material Change Order.

- I. Work Directive Change: 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. 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 Bid item shall include all costs associated with the performance of construction preparatory operations including, but not limited to, the movement of equipment and personnel to and from the Project Site; establishing and decommissioning the Field Office, storage buildings, and other facilities necessary to conduct Work under this Contract; payment of all bonding costs incurred by the Contractor; all materials and equipment required for unloading and reloading; and all costs associated with demobilization.
- b. This Bid Item shall also include any and all costs associated with the following Specification Sections:
 - 1) Section 013000 – Administrative Requirements
 - 2) Section 013216 – Construction Progress Schedule
 - 3) Section 013300 – Submittal Procedures
 - 4) Section 015000 – Temporary Facilities and Controls
 - 5) Section 017000 – Execution and Closeout Requirements
 - 6) Section 017839 – Project Record Documents
- c. 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.
- d. Partial Payments of the lump sum Bid amount for mobilization/demobilization shall be as follows:
 - 1) One-fourth (1/4) of the amount Bid for Mobilization/Demobilization can be paid to the Contractor at the first estimate payable.
 - 2) The second one-fourth (1/4) of the amount Bid for Mobilization/Demobilization can be paid with the second estimate payable.
 - 3) The third one-fourth (1/4) of the amount Bid for Mobilization/Demobilization can be paid with the third estimate payable.
 - 4) The final one-fourth (1/4) of the amount Bid for Mobilization/Demobilization shall be paid with the final payment.
 - 5) No reduction will be made, nor any increase, in the lump sum amount regardless of decreases or increases in the final total Contract amount or for any other cause.

2. Bid Item 2 – Pre-Construction Video of Project Area

- a. This Bid Item shall include any and all costs associated with following Specification Section 020100 – Video Recording
- b. The cost of this work shall be included in a lump sum bid item. Such payment shall constitute full compensation for labor, materials, equipment and other cost associated to provide a complete documentation.
- c. Videotaping shall include the entire construction area affected, including any Contractor secured waste site and material storage or staging areas. The measurement for this bid items shall be based on a complete video recording on a DVD of the entire project area.

3. Bid Item 3 – Erosion and Sediment Control
 - a. The cost of this work shall be included in a lump sum bid item. Such payment shall constitute full compensation for labor, materials, equipment and other cost associated to provide a complete installation of erosion and sediment control measures.
 - b. Erosion and Sediment Control shall include the entire construction area affected as required including any Contractor secured waste site and material storage or staging areas.

4. Bid Item 4 – 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 installation of eight (8) inch PVC SDR-35 Gravity Sewer Line including, but not limited to, clearing, grubbing, excavation, bedding, backfill, materials, fittings, pipe joints, pipe, 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 at the 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.

5. Bid Item 5 – 4” PVC SDR-35 Service Lateral Pipe
 - a. The pipe installed under this item shall be measured and paid for by the linear feet of pipe installed complete in place. The measurements 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 centerline of tie-in to centerline of tie-in.
 - b. The quantities determined as provided above will be paid for at the unit price Bid, which shall be full compensation for clearing, grubbing, excavation, bedding, backfilling, and furnishing all materials and doing all the work herein prescribed in a workmanlike and acceptable manner, including all labor, tools, equipment, supplies, testing and incidentals necessary to complete the work.
 - c. Fitting, weather used in ductile iron, PVC or HDPE, will be paid for as part of linear foot of pipe.

6. Bid Item 6 – 2” PVC SDR-21 Forcemain
 - a. The forcemain installed under this Bid Item shall be measured and paid for by the linear feet of pipe 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 centerline of tie in to centerline of tie in.
 - b. The quantities determined as provided above will be paid for at the unit price Bid, which shall be full compensation for clearing, grubbing, excavation, bedding, and backfilling and furnishing all materials and doing all the work herein prescribed in a workmanlike and acceptable manner, including all labor, tools, equipment, supplies, testing, and incidentals necessary to complete the work.
 - c. Fittings, whether used in ductile iron or PVC, will be paid for as part of linear foot of pipe.

7. Bid Item 7 - 48" Diameter Manhole Base, Cone Top, Regular Casting
 - a. This Bid item shall include all required labor, materials, equipment and all other costs associated with excavation and backfill, installation of 48-inch pre-cast manhole, and other appurtenances.
 - 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 six (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 six (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 paid under separate Bid Item.**
8. Bid Item 8 – 48" Diameter 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 six (6) feet, shall be paid for by the unit Bid price per each for Manholes.
9. Bid Item 9 – Gravity Terminal Line Cleanout
 - a. Bid items are broken out according to the size of gravity sewer line as shown on the Bid form.
 - b. Payment for this Bid Item shall include the purchase and installation of all required material in order to perform the installation as shown. This Unit Bid Price shall include the location and excavation of utilities, all required piping, concrete, cast iron cleanout frame and cover, fittings, caps, bedding, backfilling, etc.
10. Bid Item 10 – PVC Wye Connection
 - a. Payment for this work shall be per each basis.
 - b. Payment for this Bid Item shall include the purchase and installation of all required material in order to perform the installation as shown. This Unit Bid Price shall include the location and excavation of utilities, all required piping, concrete, cast iron cleanout frame and cover, fittings, caps, bedding, backfilling, etc.
11. Bid Item 11 – Connection of New Sewer to Existing Manhole
 - a. Payment for connection of new or existing sewer main to existing manholes shall be made by the unit Bid price per each connection.
 - b. Bid prices shall include all labor and materials required, including but not limited to, excavation, backfill, cutting hole in existing manhole, concrete, grout seal, modification of flow channel as necessary, fittings, and incidental pipe to make the proper connection.

12. Bid Item 12 – WVDOH Type “B” Trench Repair
 - a. This Bid item shall include all required labor, materials, equipment and all other costs associated with the type of trench repair within the WV Division of Highways Right-of-Way 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.

13. Bid Item 13 – Asphalt Driveway Repair
 - a. This Bid item shall include all required labor, materials, equipment and all other costs associated with the type of driveway restoration. All costs required for traffic control shall be included in the unit price. 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. All driveway repair Work shall be included in this linear foot Bid Price.
 - b. Payment shall be based on horizontal linear footage of driveway repair as determined by the Contractor and confirmed by the Engineer. The Engineer has final authority for measured quantity.

14. Bid Item 14 – Concrete Driveway Repair
 - a. This Bid item shall include all required labor, materials, equipment and all other costs associated with the type of driveway restoration. All costs required for traffic control shall be included in the unit price. 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. All driveway repair Work shall be included in this linear foot Bid Price.
 - b. Payment shall be based on horizontal linear footage of driveway repair as determined by the Contractor and confirmed by the Engineer. The Engineer has final authority for measured quantity.

15. Bid Item 15 – Reclamation of Disturbed Area
 - a. Measurement and Payment for this item shall include the purchase, delivery, and placement of lime, fertilizer, seed, and mulch and its application to all disturbed areas.

16. Bid Item 16 – Timberwalk Pump Station
 - a. Measurement for this bid item shall be lump sum and based on the breakdown by the Contractor in the approved Schedule of Values.
 - b. This Bid item shall include all cost associated with the installation of a new pump station including: all labor, materials and equipment for installation of new precast concrete wet well; submersible grinders pumps; piping; guide rails; prefabricated

- valve vault enclosure with piping, valves, and controls; electrical; gravel access road; site work; clearing and grubbing; and fencing as shown on the Drawings.
- c. This Bid Item shall also include all costs associated with the following Specification Sections relating to Work of this Bid Item:
- 1) Section 017823 – Operation and Maintenance Data
 - 2) Section 019100 – Commissioning
 - 3) Section 333216 – Above-Ground Valve Package with Submersible Grinder Pumps

PART 2 – PRODUCTS – Not Used

PART 3 – EXECUTION – Not Used

END OF SECTION 012000

SECTION 33216 - ABOVE GROUND VALVE PACKAGE PUMP STATION
W/SUBMERSIBLE GRINDER PUMPS

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Work under this section includes, but is not limited to, furnishing a factory built above ground valve package pump station as indicated on the project drawing, herein specified, as necessary for proper and complete performance.

1.2 REFERENCES

- B. Publications listed below form part of this specification to extent referenced in the text by basic designation only. Consult latest edition of publication unless otherwise noted.

1. American National Std. Institute (ANSI) / American Water Works Assoc. (AWWA)

- | | |
|--------------------------|---|
| a. ANSI B16.1 | Cast iron pipe flanges and flanged fittings. |
| b. ANSI/AWWA C115/A21.51 | Cast/ductile iron pipe with threaded flanges. |
| c. ANSI 253.1 | Safety Color Code for Marking Physical Hazards. |
| d. ANSI B40.1 | Gages, Pressure and Vacuum. |
| e. AWWA C508 | Single Swing Check Valves. |

2. American Society for Testing and Materials (ASTM)

- | | |
|--------------|-------------------------------------|
| a. ASTM A48 | Gray Iron Castings. |
| b. ASTM A126 | Valves, Flanges, and Pipe Fittings. |
| c. ASTM A307 | Carbon Steel Bolts and Studs. |
| d. ASTM A36 | Structural Steel. |

3. Institute of Electrical and Electronics Engineers (IEEE)

- | | |
|----------------------|---|
| a. ANSI/IEEE Std 100 | Standard Dictionary of Electrical Terms. |
| b. ANSI/IEEE Std 112 | Test Procedure for Polyphase Induction |
| c. IEEE Std 242 | Protection of Industrial and Control Power Systems. |

4. National Electric Code (NEC) / National Electrical Manufacturers Assoc. (NEMA)

- | | |
|-----------------|-------------------------------------|
| a. NEC | National Electric Code. |
| b. NEC 701 | National Electric Code article 701. |
| c. NEMA Std MG1 | Motors and Generators. |

5. Miscellaneous References

- | |
|--|
| a. Ten-State Standards Recommended Standards for Sewage Works. |
| b. Hydraulic Institute Std for Centrifugal, Rotary and Reciprocating Pumps. |
| c. NMTBA and JIC Std National Machine Tool Builders Association and Joint Industrial Council Standards |
| d. ISO 9001 International Organization for Standardization. |

1.3 SYSTEM DESCRIPTION

- A. Contractor shall furnish and install one (1) factory built automatically controlled above ground submersible pump valve package capable of handling raw unscreened sewage or similar liquids.
- B. The pumps and mechanical slide rail accessories shall be installed in the wet well as shown on the project plans. The pump control panel, liquid level control, valves and piping shall be installed within a factory built fiberglass enclosure.
- C. Factory built pump station design, including materials of construction, pump features, valves and piping, and motor controls shall be in accordance with requirements listed under PART 2 - PRODUCTS of this section.

1.4 PERFORMANCE CRITERIA

- A. Pumps must be designed to handle raw, unscreened, domestic sanitary sewage. Pumps shall have the listed discharge connection. Each pump shall be selected to perform under following operating conditions:

Timberwalk Station

1. Type	2.0 HP, bi-directional grinder
2. Discharge type	2" slide rail assembly
3. Capacity (GPM)	30
4. Total Dynamic Head (FT)	30
5. Total Discharge Static Head (FT)	19.2

- B. Site power furnished to pump station shall be 3 phase, 60 hertz, 208 volts, 3-wire, maintained within industry standards. The available fault current provided at the pump station control panel is 65 kA rms symmetrical. Voltage tolerance shall be plus or minus 10 percent. Phase-to-phase unbalance shall not exceed 1% average voltage as set forth in NEMA Standard MG-1. Control voltage shall not exceed 132 volts.

1.5 SUBMITTALS

A. Product Data

- 1. Prior to fabrication, the pump station manufacturer shall submit 6 printed copies of submittal data and 1 electronic copy for review and approval.
- 2. Submittal shall include shop drawings, electrical ladder logic drawings, and support data as follows: Catalog cut sheets reflecting characteristics for major items of equipment, materials of construction, major dimensions, motor data, pump characteristic curves showing the design duty point capacity (GPM), head (FT), and hydraulic brake horsepower (BHP). Electrical components used in the motor branch and liquid level control shall be fully described.
- 3. Shop drawings shall provide layout of mechanical equipment and anchor bolt locations for station. Pipe penetrations and station access clearances shall be dimensioned relative to the station centerline. The electrical ladder logic drawings shall illustrate motor branch and

liquid level control circuits to extent necessary to validate function and integration of circuits to form a complete working system.

B. Operations and Maintenance Manuals

1. Installation shall be in accordance with written instructions provided by the pump station manufacturer. Comprehensive instructions supplied at time of shipment shall enable personnel to properly operate and maintain all equipment supplied. Content and instructions shall assume operating personnel are familiar with pumps, motors, piping and valves, but lack experience on exact equipment supplied.
2. Documentation shall be specific to the pump station supplied and collated in functional sections. Each section shall combine to form a complete system manual covering all aspects of equipment supplied by the station manufacturer. Support data for any equipment supplied by others, even if mounted or included in overall station design, shall be provided by those supplying the equipment. Instructions shall include the following as a minimum:
 - a. Functional description of each major component, complete with operating instructions.
 - b. Instructions for operating pumps and pump controls in all modes of operation.
 - c. Calibration and adjustment of equipment for initial start-up, replacement of level control components, or as required for routine maintenance.
 - d. Support data for commercially available components not produced by the station manufacturer, but supplied in accordance with the specifications, shall be supported by literature from the prime manufacturer and incorporated as appendices.
 - e. Electrical schematic diagram of the pump station circuits shall be in accordance with NFPA 70. Schematics shall illustrate, to the extent of authorized repair, pump motor branch, control and alarm system circuits including interconnections. Wire numbers and legend symbols shall be shown. Schematic diagrams for individual components, not normally repairable by the station operator, need not be included. Details for such parts shall not be substituted for an overall system schematic. Partial schematics, block diagrams, and simplified schematics shall not be provided in lieu of an overall system diagram.
 - f. Mechanical layout drawing of the control panel and the pump station and components, prepared in accordance with good commercial practice, shall provide installation dimensions and location of all pumps, motors, valves and piping.
3. Operation and maintenance instructions which rely on vendor cut-sheets and literature which include general configurations, or require operating personnel to selectively read portions of the manual shall not be acceptable. Operation and maintenance instructions must be specific to equipment supplied in accordance with these specifications.
4. Pump station manufacturer shall provide six (6) printed copies and one (1) copy on electronic media.

1.6 QUALITY ASSURANCE

- A. The pump station manufacturer must be ISO 9001:2008 revision certified, with scope of registration including design control and service after sales activities.
- B. The pump station manufacturer must be registered to the ISO 14001 Environmental Management System standard and as such is committed to minimizing the impact of its activities on the environment and promoting environmental sustainability by the use of best management practices, technological advances, promoting environmental awareness and continual improvement.
- C. Upon request from the engineer, the pump station manufacturer shall prove financial stability and ability to produce the station within the specified delivery schedules. Evidence of facilities, equipment and expertise shall demonstrate the manufacturer's commitment to long term customer service and product support.
- D. The manufacturer's technical representative shall inspect the completed installation, correct or supervise the correction of any defect or malfunction, and instruct operating personnel in the proper operation and maintenance of the equipment as described in Part 3 of this section.

1.7 MANUFACTURER'S WARRANTY

- A. The pump station manufacturer shall warrant all equipment to be of quality construction, free of defects in material and workmanship. A written warranty shall include specific details described below.
 - 1. In addition to defects in material and workmanship, fiberglass reinforced polyester station enclosures are warranted for 60 months to be resistant to rust, corrosion, corrosive soils, effects of airborne contamination or physical failures occurring in normal service for the period of the pump station warranty.
 - 2. All other equipment, apparatus, and parts furnished shall be warranted for sixty (60) months, excepting only those items that are normally consumed in service, such as light bulbs, oils, grease, packing, gaskets, O-rings, etc. The pump station manufacturer shall be solely responsible for warranty of the station and all components.
- B. Components failing to perform as specified by the engineer, or as represented by the manufacturer, or as proven defective in service during the warranty period, shall be replaced, repaired, or satisfactorily modified by the manufacturer.
- C. It is not intended that the station manufacturer assume liability for consequential damages or contingent liabilities arising from failure of any vendor supplied product or part which fails to properly operate, however caused. Consequential damages resulting from defects in design or delays in delivery are also beyond the manufacturer's scope of liability.
- D. Equipment supplied by others and incorporated into a pump station or enclosure is not covered by this limited warranty. Any warranty applicable to equipment selected or supplied by others will be limited solely to the warranty, if any, provided by the manufacturer of the equipment.

- E. This limited warranty shall be valid only when installation is made and use and maintenance is performed in accordance with manufacturer recommendations. A start-up report completed by an authorized manufacturer's representative must be received by manufacturer within 30 days of the initial date the unit is placed into service. The warranty shall become effective on the date of acceptance by the purchaser or the purchaser's authorized agent, or 60 days after installation, or 90 days after shipment from the factory, whichever occurs first.

PART 2 - PRODUCT

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering submersible grinder pumps which may be incorporated in the work include, but are not limited to, the following:
 - 1. Pumps
 - a. Zoeller Engineered Products
 - b. Flygt Corporation
 - 2. Above Ground Station, Piping, Valves, Control Panel and Liquid Level System
 - a. Gorman Rupp
 - b. Zoeller

2.2 UNITARY RESPONSIBILITY

- A. In order to unify responsibility for proper operation of the complete pumping station, it is the intent of these Specifications that all system components be furnished by a single supplier (unitary source). The pumping station must be of standard catalog design, totally warranted by the manufacturer.

2.3 STATION FIBERGLASS ENCLOSURE AND BASE

- A. The station enclosure shall contain and enclose all valves, and associated controls and shall be constructed to enhance serviceability by incorporating the following design characteristics:
 - 1. Two access panels per side of station shall be provided. Panels shall be sized and placed to permit routine maintenance operations through the panel openings of the enclosure. For these purposes, routine maintenance shall include frequently performed adjustments and inspections of the electrical components, controls and valves.
 - 2. The access panels shall be provided with a hinge and latch. Hinge shall be the continuous type. Latch shall engage the enclosure at not less than three places, and shall be protected by a keyed lock.
 - 3. One enclosure side shall contain a screened vent to maximize air flow for enclosure ventilation.
 - 4. Station enclosure, less base, must be removable or able to be disassembled following the removal of reusable hardware.

5. Removal or disassembly of the enclosure shall be accomplished by not more than two (2) maintenance personnel without the use of lifting equipment.
- B. The station enclosure shall be manufactured of molded reinforced orthophthalic polyester resins with a minimum of 30% fiberglass, and a maximum of 70% resin. Resin fillers or extenders shall not be used.
- C. Glass fibers shall have a minimum average length of 1-1/4-inches. Major design considerations shall be given to structural stability, corrosion resistance, and watertight properties. The polyester laminates shall provide a balance of mechanical, chemical, and electrical properties to insure long life. They must be impervious to micro-organisms, mildew, mold, fungus, corrosive liquids, and gases which can reasonably be expected to be present in the environment surrounding the wet well.
- D. All interior surfaces of the housing shall be coated with a polyester resin-rich finish. It shall provide:
 1. Maintenance-free service
 2. Abrasion resistance
 3. Protection from sewage, greases, oils, gasoline, and other common chemicals
 4. The outside of the enclosure shall be coated with a suitable pigmented resin, compounded to insure long maintenance-free life.
- E. An exhaust blower shall be mounted on the side of the enclosure. Blower capacity shall be sufficient to change station air a minimum of once every two minutes. Blower motor shall be operated automatically and shall be turned on at approximately 70 degrees F and shall be turned off at 55 degrees F. Blower motor and control circuit shall be protected by a thermal-magnetic air circuit breaker to provide overcurrent and overload protection. Blower exhaust outlet shall be designed to prevent the entrance of rain, snow, rocks, and foreign material.

2.4 STATION BASE

- A. Station base shall be constructed of pre-cast, reinforced concrete bonded inside a fiberglass form covering top and sides, and shall be designed to insure adequate strength to resist deformation of the structure during shipping, lifting, or handling. The enclosure base shall function at the wet well top and incorporate a duplex access lid, sized for the installation and removal of the specified pumps, and shall be of sufficient size to permit access to the wet well. Gray color used shall de-emphasize the presence of dirt, grease, etc., and shall be provided with a non-skid surface.
- B. A static wet well vent shall be mounted in the station base, and be housed in the station enclosure. The station enclosure shall provide a transition area between the wet well and the vent outlet. The vent shall terminate through the station wall with a screened opening which shall be designed to prevent the entrance of rain, snow, rocks and foreign material.
- C. The station base shall incorporate a cable transition adapter for the pump cables, level controls, and associated wiring. The adapter shall provide for a vapor tight transition between the wet well and the lift station enclosure. The adapter shall incorporate cable grips for each cable and be provided with a gasket between the adapter and the station for a positive seal. Junction boxes shall not be considered for cable transition.

- D. The station base shall be furnished with elastomeric compression sealing devices for all piping penetrations to provide for a vapor tight transition between the wet well and lift station enclosure.
- E. Station Heater
 - 1. Pump station shall be provided with a 1300/1500 watt, 115 volt electric heater with cord, thermostat and grounding plug. Ungrounded heaters shall not be acceptable.
- F. Insulation Package
 - 1. The pump station shall be furnished with 1" thick spray foam insulation, which shall be applied to the roof, doors, and corner panels.
- F. Discharge Gauge Kit
 - 1. The pump station shall be equipped with a glycerin-filled pressure gauge to monitor discharge pressures. Gauge shall be a minimum of 4-inches in diameter, and shall be graduated in feet water column. Rated accuracy shall be 1 % of full scale reading. Pressure gauge shall be graduated 0 to 150 feet water column minimum. Gauge kit shall be mounted and complete with all hoses and stainless steel fittings and shall include a shutoff valve installed in each connection to discharge piping and a three way valve to monitor either pump.

2.5 PUMP DESIGN

- A. The Owner and Engineer believe the following manufacturers are capable of producing equipment and products, which will satisfy the requirements of this Section. This statement, however, shall not be construed as an endorsement of a particular manufacturer's product, nor shall it be construed that a named manufacturer's standard product will comply with the requirements of this Section. It shall be the responsibility of the contractor to coordinate with the "selected" equipment manufacturer by use of this specification and all related design drawings for any necessary adjustments, modifications or alterations to standard products to ensure that the product complies with all sections of this specification. Candidate manufacturers include Zoeller Engineered Products, or Flygt. The pumps shall be ZEP Model 7011 with bi-directional motor.
- B. The submersible pump shall be capable of handling sanitary sewage and grinding it into fine slurry enabling it to be pumped over long distances in pipelines as small as 1.25" in diameter. The pump shall be bi-directional as to allow the motor to operate in either direction, thereby enabling the cutter blades to change their rotational direction with each duty cycle. This action, initiated by the control panel, will extend the effective service life of the cutter mechanisms plus eliminate clogs and jams in the pump housing. Single directional designs shall not be considered equal. The pump shall have a shut-off head of 65.9 feet and a maximum flow of 30 GPM at 30 feet TDH.
- C. Each centrifugal grinder pump shall be equal to the U.L. listed model 7011 submersible type as manufactured by Zoeller Engineered Products of Louisville, Ky. (800-928-7867). The castings shall be constructed of class 30 cast iron. The motor housing shall be finned and oil-filled to dissipate heat. Air-filled motors shall not be considered equal since they do not properly dissipate heat from the motor. All external-mating parts shall be machined and sealed with a

Viton square ring. All fasteners exposed to the liquid shall be 300 series stainless steel. The motor shall be protected in the event of cord damage with a sealed junction chamber which will prevent moisture wicking into the motor housing. The motor shall be protected on the lower side with a tandem mechanical seal arrangement with each seal having a separate spring assembly. The oil-filled seal chamber located between the two mechanical seals shall contain 2 probes to detect seal leakage. The upper and lower ball bearings shall be capable of handling all thrust loads. The pump housing shall be of the concentric design thereby equalizing the pressure forces inside the housing, which will extend the service life of the seals and bearings. The pump shall have a SS lifting bracket.

- D. The pump shall be supplied with a minimum 35' multi-conductor power cord. It shall be SO type cord capable of continued exposure to the pumped liquid. Power cord shall be sized for the rated full load amp loading of the pump in accordance with the National Electric Code. Power cable shall enter into the junction box through a compression type-sealing gland. Water sealing and strain relief is separated. The entire junction chamber shall be sealed off from the motor housing by through wall terminals to protect the motor from moisture.
- E. The oil-filled motor shall be a Class F insulated NEMA B design rated for continuous duty. At maximum load, the winding temperature will not exceed 250 degrees F unsubmerged. Since air-filled motors are not capable of dissipating heat, they shall not be considered equal. Single-phase units shall have an integral thermal overload switch in the windings for protecting the motor. Start capacitors and relay shall be mounted externally from the pump in a panel within 50 feet of the pump location. Three phase units shall have a bimetallic thermal sensor and shall use magnetic starters with overload relays in the control panel for further protection. Pump motor shall be 2.0 HP, 200 Volt and 3 phase.
- F. Upper and lower ball bearings made of high carbon chromium steel shall be provided to prevent shaft deflection by withstanding all thrust and radial loads. The bearing system shall be designed to enable proper cutter alignments from shut off head to maximum load at 5-feet of TDH. The motor shaft shall be made of 416 SS and have a minimum diameter of 1.0".
- G. Pump shall have a dual mechanical seal configuration with the seals mounted in tandem. Each seal assembly having silicon carbide / silicon carbon lower and silicon carbide / silicon carbide upper faces with Buna-n elastomer and 316SS spring. It shall be equal to a Crane Type 21 configuration. Double seals with a common intermediate spring and lip seals shall not be considered equal.
- H. The impeller shall be a fully balanced ductile iron vortex with pump out vanes on the back shroud to keep debris away from the seal area. It shall be keyed and bolted to the motor shaft. The impeller design shall be such that the GPM capacity of the pump is the same regardless of which direction it is rotating. Single directional impellers are not considered equal.
- I. The cutter and plate shall be constructed of 440 SS with a Rockwell C hardness of 55 - 60. The stationary cutter plate shall have specially designed orifices machined through it which enable the slurry to flow through the pump housing at an equalized pressure and velocity. The rotating "star" cutter design shall have double-sided cutting blades thereby increasing the number of cutting surfaces. The design of the plate and cutter allows the motor to rotate in either direction. Other cutter designs with tight clearances and those that grind on the circumference of the rotary plate shall not be considered equal.
- J. The exterior castings of the pump shall be protected with powder coated epoxy finish.

- K. Components required for the repair of the pump shall be readily available within 24 hours. Components such as mechanical seals and bearings shall not be of a proprietary design and be available from local industrial supply houses. Special tools shall not be required to service the pump. A network of service stations shall be available nationwide in those cases where service requirements are beyond the scope of in-house service mechanics.
- L. The pump shall have cast iron support legs enabling it to be a freestanding unit. The legs will be high enough to allow solids and long stringy debris to enter the cutter assembly.
- M. Rail system with pump suspended by means of a sealed pump plate attached to the pump. Stainless steel lifting cables shall be provided.
 - a. Rail pipes and are to be provided by the contractor.
 - b. SS intermediate stabilizer are required for rail systems used where basin depths are greater than 12 feet as shown on the drawings.
- N. Each pump shall be operated and tested in liquid during the production process. It shall be checked at its maximum running point for performance, amps, grounding, winding insulation, and water tightness.
- O. A certified, non-witnessed performance test based on the Hydraulic Institute or SWPA (Submersible Wastewater Pump Association) Test Standard for submersible pumps less than 13 HP shall be performed and submitted to the engineer for approval prior to shipment.
- P. Start-up services at the job site by an authorized representative of Zoeller Engineered Products shall be required. Start-up report form ZM1074 should be completed in the presence of the installers and returned to the Project Engineer and Zoeller Engineered Products.

2.6 PUMP WARRANTY

- A. The pumps shall be warranted for 24 months from beneficial use and receipt of a startup report by the authorized manufacturer's representative. Subject to inspection, the warranty shall include 100% parts and repair labor when delivered to the manufactures warranty center.

2.7 WET WELL ACCESS

- A. The wet well access shall be fabricated from welded aluminum sections. A hinged aluminum door shall be provided for each pump. The hinged door shall be fabricated from 1/4" thick aluminum with non-skid diamond tread on upper surface. All hardware on access assembly shall be stainless steel with a flush upper surface without protrusions. For safety, the door shall have a 300 lbs./sq.ft. rating and be fitted with a recessed staple for padlock. Door shall be furnished with a flush aluminum drop handle and automatic hold open arm.
- B. A hatch safety net system shall be provided for increased operator protection from falls. The safety net shall consist of aluminum brackets and side rails, 316 SST rings and corner hook, and a DuPont High Tenacity Nylon Net.

2.8 2" SLIDE RAIL SYSTEM VALVES AND PIPING

- A. Check Valve: Each pump shall be equipped with a full flow type ball check valve. Valve shall be constructed with Victaulic ends. Valve body shall be stainless steel. Valve shall be rated at 175 PSI water working pressure, 350 PSI hydrostatic test pressure.
- B. Each discharge line shall be equipped with a ¼ turn ball valve to permit isolation of the pumps from the common discharge header. Valve body shall be stainless steel with Victaulic end connections. Valve shall be furnished with a drip-tight shutoff ball mounted in stainless steel.
- C. Piping
 - 1. Victaulic fitted header pipe shall be schedule 40 stainless steel.
 - 2. Header piping will terminate 6" below the station base as shown. Termination shall be plain end.
 - 3. All pipes connected to the pump station shall be supported according to good commercial practice.

2.9 ELECTRICAL CONTROL COMPONENTS

- A. The pump station control panel will be tested as an integral unit by the pump station manufacturer.
- B. Panel Enclosure
 - 1. The electrical control equipment shall be mounted within a 36"x30"x14" NEMA 1 stainless steel, dead front type control enclosure. The enclosure door shall be hinged and sealed with a neoprene gasket. It shall include a removable plated steel back panel on which control components shall be mounted. Back panel shall be secured to enclosure with collar studs. Operator controls shall be mounted on the enclosure door. The enclosure shall be mounted within the fiberglass valve enclosure. The control panel shall be equipped with vapor emission type corrosion inhibitors.
 - 2. All control components shall be securely fastened to a removable back panel with screws and lock washers. Switches, indicators and instruments shall be mounted through the control panel door. All control devices and instruments shall be secured to the sub-plate with machine screws and lockwashers. Mounting holes shall be drilled and tapped; Self-tapping screws shall not be used to mount any components. All connections from the back panel to door mounted or remote devices shall be made through terminal blocks. All control devices shall be clearly labeled to indicate function.
 - 3. A main terminal block and ground bar shall be furnished for field connection of the electrical supply. The connections shall be designed to accept copper conductors of sufficient size to serve the pump station loads. The main terminal block shall be mounted to allow incoming wire bending space in accordance with Article 373 of the National Electrical Code (NEC).

C. UL Label Requirement

1. Pump station controls shall conform to third party safety certification. The manufacturer shall be certified to apply a serialized UL label listed for "Enclosed Industrial Control Panels". The enclosure, and all components mounted on the subpanel or control cover shall conform to UL descriptions and procedures.

D. Transient Voltage Surge Suppressor

1. The control panel shall be equipped with a modular surge arrester to minimize damage to the pump motors and control from transient voltage surges. The suppressor shall utilize thermally protected by heavy duty zinc-oxide varistors encapsulated in a non-conductive housing. Mechanical indicators shall be provided on each phase to indicate protection has been lost. The suppressor shall have a short circuit current rating of 200,000 Amps and a Maximum Discharge current rating [I_{max}] of 40,000 Amperes. Nominal discharge current [I_n] is 20,000 Amperes. Surge arrester according to UL 1449 3rd Edition, Type 2 component assembly.

E. Voltage Alert Indication

1. The control panel shall include a voltage alert indicator to reduce the risk of electrical arc flash by pre-verifying the electrical isolation from outside of the control panel. Hardwired to the main incoming point of termination, the indicator shall be powered by the same voltage that it indicates utilizing redundant circuitry, thereby flashing whenever voltage is present. An eight detector display shall visually alert the presence of dangerous AC or DC potentials occurring between any combinations of the monitored input lines.

F. Station Enclosure Low Temperature Alarm

1. Pump station shall be supplied with a thermostat which shall monitor interior station temperature. The control shall incorporate an unpowered dry contact wired to terminal blocks for field connection to a remote alarm device. The contact will close in the event that the temperature within the enclosure falls below approximately 35 degrees F.

G. Motor Branch Components

1. A properly sized heavy duty air circuit breaker shall be furnished for each pump motor, and shall have a symmetrical RMS interrupting rating of 10,000 amperes at 208 volts. All circuit breakers shall be sealed by the manufacturer after calibration to prevent tampering.
2. A padlocking operating mechanism shall be installed on each motor circuit breaker. Operator handles for the mechanisms shall be located on the door, with interlocks which permit the door to be opened only when circuit breakers are in the "OFF" position. An additional mechanism(s) shall be provided on the circuit breaker permitting the breaker to be operated and/or locked with the control panel door in the open position.
3. Motor Starter
 - a. An open frame, across-the-line, NEMA rated magnetic motor starter shall be furnished for each pump motor. Starters of NEMA size 1 and above shall be designed for addition

of at least two auxiliary contacts. Starters rated "O", "OO", or fractional size shall not be acceptable. Power contacts shall be double-break and made of cadmium oxide silver. Coils shall be epoxy molded for protection from moisture and corrosive atmospheres. The starter assembly shall be equipped with a metal mounting plate for durability. All motor starters shall be equipped to provide under-voltage release and overload protection on all three phases. Motor starter contacts and coils shall be easily replaceable without removing the motor starter from its mounted position.

- b. The panel shall incorporate the automatic reversing function, which enables the cutter blades and impeller to rotate in either the clockwise or counter clockwise direction. With each duty cycle, the cutters will rotate in the opposite direction from the previous operational cycle.
 - c. Overload relays shall be solid-state block type, having visual trip indication with trip-free operation. Electrically resetting the overload will cause one (1) normally open and one (1) normally closed isolated alarm/control contact to reset, thus re-establishing a control circuit. Trip setting shall be governed by solid-state circuitry and adjustable current setting. Trip classes shall be 10, 15 and 20. Additional features to include phase loss protection, selectable jam/stall protection and selectable ground fault protection.
 - d. Reset pushbutton, mounted through the control panel door, shall permit resetting the overload relays without opening the door.
4. All motor branch and power circuit components shall be of highest industrial quality. The short circuit current rating of all power circuit devices shall be a tested combination or evaluated per the National Electrical Code Article 409. The lowest rated power circuit component shall be the overall control panel short circuit rating and shall not be less than the fault current available. The minimum control panel rating shall not be less than 10 kA, rms symmetrical. Control assemblies operating at 120 volts nominal or less may be provided with transformers which limit the fault current and may be rated less than the minimum required short circuit rating.

H. Other Control Components

1. The pump control panel shall be equipped to terminate pump operation due to high motor winding temperature or moisture in the motor housing or seal cavity, utilizing contacts in the pump motor housing and seal cavity. If a moisture or thermal event should occur, the motor starter will drop out and a visible indicator on the door shall indicate the pump motor has been shut down. If shutdown is due to high motor temperature, motor power will automatically be restored when the temperature returns to normal range. If the shutdown occurs due to moisture, a manual reset will be required before motor power is restored. Dry contacts, wired to terminal blocks, shall be furnished for each pump for thermal/moisture shutdown.
2. The control circuit shall be protected by a normal duty thermal- magnetic air circuit breaker which shall be connected in such a manner as to allow control power to be disconnected from all control circuits.
3. Pump mode selector switches shall be connected to permit manual start and manual stop for each pump individually, and to select automatic operation of each pump under control of the liquid level control system. Manual operation shall override the liquid level control

system. Selector switches shall be heavy duty, oil-tight design, with contacts rated NEMA A300 minimum.

4. Pump alternation shall be integral to the liquid level controller. Provisions for automatic alternation or manual selection shall also be integral to the liquid level controller.
5. Control panel shall be equipped with one oil-tight pilot light for each pump motor. Light shall be wired in parallel with the related pump motor starter to indicate that the motor is on or should be running.
6. Six digit elapsed time meter shall be shall be displayed on the Integrinex™ Standard operator interface to indicate total running time of each pump in "hours" and "tenths of hours". Pump runtime shall be adjustable and password protected.
7. A switch shall be provided to permit the station operator to select automatic alternation of the pumps, to select pump number one to be the lead pump for each pumping cycle or to select pump number two to be the lead pump for each pumping cycle. Selector switch shall be oil-tight design, with contacts rated NEMA A300 minimum.
8. A duplex ground fault indicating utility receptacle providing 115 VAC, 60 Hertz, single phase current, shall be mounted on the door panel of the control enclosure. Receptacle circuit shall be protected by a 15 ampere thermal-magnetic circuit breaker.
9. The lift station shall be equipped with a 3 KVA stepdown transformer to supply 115 volt, AC, single phase for the control and auxiliary equipment. The primary and secondary side of the transformer to be protected by a thermal magnetic circuit breaker, sized to meet the power requirements of the transformer. An operating mechanism shall penetrate the control panel door and a padlockable operator handle shall be secured on the exterior surface. Interlocks must prevent opening the door until circuit breakers are in "OFF" position. An additional mechanism(s) shall be provided on the circuit breaker permitting the breaker to be operated and/or locked with the control panel door in the open position.
10. The control panel shall be equipped to monitor the incoming power and shut down the pump motors when required to protect the motor(s) from damage caused by phase reversal, phase loss, voltage unbalance, high voltage, and low voltage. An adjustable time delay shall be provided to minimize nuisance trips. The motor(s) shall automatically restart, following an adjustable time delay, when power conditions return to normal.
11. Pump Start Delay
 - a. The control circuit for pump #2 shall be equipped with a time delay to prevent simultaneous motor starts.
12. Panel Heater
 - a. The control panel shall be equipped with a panel heater to minimize the effects of humidity and condensation. The heater shall include a thermostat.

I. Wiring

1. The control panel, as furnished by the manufacturer, shall be completely wired. The contractor shall field connect the power feeder lines to the main terminal block, final connections to the remote alarm devices, and the connections between the pump and the pump motor control. All wiring, workmanship, and schematic wiring diagrams shall be in compliance with applicable standards and specifications set forth by the National Electric Code (NEC).
2. All user serviceable wiring shall be type MTW or THW, 600 volts, and shall be color coded as follows:
 - a. Line and load circuits, AC or DC power..... Black
 - b. AC control circuit less than line voltage..... Red
 - c. DC control circuit..... Blue
 - d. Interlock control circuit, from external source..... Yellow
 - e. Equipment grounding conductor..... Green
 - f. Current carrying ground..... White
 - g. Hot with circuit breaker open..... Orange
3. Control circuit wiring inside the panel, with the exception of internal wiring of individual components, shall be of 16 gauge minimum, type MTW or THW, 600 volts. Power wiring shall be 14 gauge minimum.
4. Motor branch and other power conductors shall not be loaded above the temperature rating of the connected termination. Wires shall be clearly numbered at each end in accordance with the electrical diagrams. All wires on the sub-plate shall be bundled and tied.
5. Wires connected to components mounted on the enclosure door shall be bundled and tied in accordance with good commercial practice. Bundles shall be made flexible at the hinged side of the enclosure. Adequate length and flex shall be provided to allow the door to swing to its full open position without undue stress or abrasion on the wire or insulation. Bundles shall be held in place on each side of the hinge by mechanical fastening devices.

J. Conduit requirements are as follows

1. All conduit and fittings shall be UL listed.
2. Liquid tight flexible metal conduit shall be constructed of smooth, flexible galvanized steel core with smooth abrasion resistant, liquid tight, polyvinyl chloride cover.
3. Conduit shall be supported in accordance with articles 346, 347, and 350 of the National Electric Code.
4. Conduit shall be sized according to the National Electric Code.

K. Grounding

1. The pump control manufacturer shall provide a common ground bar mounted on the enclosure back plate. The mounting surface of the ground bar shall have any paint removed before making final connections.

2. The contractor shall make the field connections to the main ground lug and each pump motor in accordance with the National Electric Code.

L. Identification

1. A permanent corrosion resistant name plate(s) shall be attached to the control and include the following information:
 - a. Equipment serial number
 - b. Control panel short circuit rating
 - c. Supply voltage, phase and frequency
 - d. Current rating of the minimum main conductor
 - e. Electrical wiring diagram number
 - f. Motor horsepower and full load current
 - g. Motor overload heater element
 - h. Motor circuit breaker trip current rating
 - i. Name and location of equipment manufacturer
2. Control components shall be permanently marked using the same identification shown on the electrical diagram. Identification label shall be mounted adjacent to the device.
3. Switches, indicators, and instruments shall be plainly marked to indicate function, position, etc. Marking shall be mounted adjacent to and above the device.

2.10 LIQUID LEVEL CONTROL

- A. The manufacturer of the liquid level control system must be ISO 9001:2000 revision certified, with scope of registration including design control and service after sales activities.
- B. The level control system shall start and stop the pump motors in response to changes in wet well level, as set forth herein.
- C. The level control system shall be capable of operating as a submersible transducer type system.
- D. The level control system shall utilize alternation to select first one pump, then the second pump, then the third pump (if required), to run as lead pump for a pumping cycle. Alternation shall occur at the end of a pumping cycle, or in the event of excessive run time.
- E. The level control system shall utilize an electronic pressure switch which shall continuously monitor the wet well level, permitting the operator to read wet well level at any time. Upon operator selection of automatic operation, the electronic pressure switch shall start the motor for one pump when the liquid level in the wet well rises to the "lead pump start level". When the liquid is lowered to the "lead pump stop level", the electronic pressure switch shall stop this pump. These actions shall constitute one pumping cycle. Should the wet well level continue to rise, the electronic pressure switch shall start the second and/or third pump (if required) when the liquid reaches the "lag pump start level", or "standby pump start level" so that all pumps are operating. These levels shall be adjustable as described below.
 1. The electronic pressure switch shall include integral components to perform all pressure sensing, signal conditioning, EMI and RFI suppression, DC power supply and 120 volt outputs. Comparators shall be solid state, and shall be integrated with other components to perform as described below.

2. The electronic pressure switch shall be capable of operating on a supply voltage of 12-24Vdc in an ambient temperature range of -10 degrees C (14 degrees F) through 55 degrees C (131 degrees F). Ingress Protection of IP56 for indoor use with closed cell neoprene blend gasket material. Evaluated by Underwriters Laboratories for Pollution Degree 2 device for U.L. and cU.L. Control range shall be 0 to 33.3 feet of water with an overall repeat accuracy of (plus/minus) 0.1 feet of water. Memory shall be non-volatile. A Battery backed real time clock shall be standard.
3. Eleven optically isolated, user defined digital inputs for pump and alarm status. Rated at 10mA at 24Vdc. Eight digital output relays (mechanical contacts), configurable for pump start/stop or alarms. Three relays rated at 12 Amp @ 28Vdc and 120Vac, five relays rated at 3Amp @ 30Vdc and 120Vac. The electronic pressure switch shall consist of the following integral components: pressure sensor, display, electronic comparators, digital inputs and digital output relays.
 - a. The transducer shall convert the input to a proportional electrical signal for distribution to the display and electronic comparators. The transducer output shall be filtered to prevent control response to level pulsations or surges. The transducer range shall be 0-14.5 PSI, temperature compensated from -40 degrees C (-40 degrees F) through 85 degrees C (185 degrees F), with a repeat accuracy of (plus/minus) 2.5% full scale about a fixed temperature. Transducer overpressure rating shall be three (3) times full scale.
 - b. The electronic pressure switch shall incorporate a digital back lighted LCD panel display which, upon operator selection, shall indicate liquid level in the wet well, and pump status indication for up to 3 pumps. The display shall include a 128 x 64 bit resolution LCD to read out directly in feet of water, accurate to within one-tenth foot (0.1-foot), with a full scale indication of not less than 12 feet. The display shall be easily convertible to indicate English or metric units.
 - c. Level adjustments shall be electronic comparator set-points to control the levels at which the lead, lag and standby pumps start and stop. Each of the level settings shall be easily adjustable with the use of membrane type switches and accessible to the operator without opening any cover panel on the electronic pressure switch. Controls shall be provided to permit the operator to read the selected levels on the display. Such adjustments shall not require hard wiring, the use of electronic test equipment, artificial level simulation or introduction of pressure to the electronic pressure switch.
 - d. Each digital input can be programmed as pump run, pump HOA, pump high temp, pump moisture/thermal, starter failure (FVNR, RVSS, VFD), and phase failure. Inputs are used for status and alarm indication.
 - e. Each output relay in the electronic pressure switch shall be hard contact mechanical style. Each relay input shall be optically isolated from its output and shall incorporate zero crossover switching to provide high immunity to electrical noise. Each output relay shall have an inductive load rating equivalent to one NEMA size 3 contactor. A pilot relay shall be incorporated for loads greater than a size 3 contactor.

4. The electronic pressure switch shall be equipped with alarm banners with time and date history for displaying alarm input notification. Alarm history will retain 16 of the most recent alarm events.
5. The electronic pressure switch shall be equipped with pump start/stop and alarm input delay(s) that have an adjustable delay set points.
6. An Antiseptic function with a built in timer shall be incorporated in the electronic pressure switch to prevent the well from becoming septic.
7. The electronic pressure switch shall be capable of jumping to next available pump if current pump is out of service due to pump failure or manual selection. Circuit design in which application of power to the lag pump motor starter is contingent upon completion of the lead pump circuit shall not be acceptable.
8. The electronic pressure switch shall be equipped with a simulator system capable of performing system cycle testing functions.
9. The electronic pressure switch shall be capable of calculating and displaying pump elapse run time. The elapse run time is resettable and adjustable.
10. The electronic pressure switch shall have internal capability of providing automatic simplex, duplex, and triplex alternation, manual selection of pump sequence operation, and alternation in the event of 1-24 hours of excessive run time.
11. The electronic pressure switch shall be equipped with a security access code to prevent accidental set-up changes and provide liquid level set-point lock-out. The supervisor access code is adjustable.
12. The electronic pressure switch shall be equipped with one (1) 0-33 ft. W.C. input, one (1) scalable analog input of either 0-5Vdc, or 4-20mA, and one (1) scalable analog output of either 0-5Vdc, 0-10Vdc or 4-20mA. Output is powered by 10-24Vdc supply. Load resistance for 4-20mA output shall be 100-1000 ohms.
13. The electronic pressure switch shall include a DC power supply to convert 120Vac control power to 12 or 24Vdc power. The power supply shall be 500 mA (6W) minimum and be UL listed Class II power limited power supply.
14. The electronic pressure switch shall be equipped with an electronic comparator and mechanical output relay to alert maintenance personnel to a high liquid level in the wet well. An alarm banner, visible on the front of the controller, shall indicate that a high wet well level exists. The alarm signal shall be maintained until the wet well level has been lowered and the circuit has been manually reset. High water alarm shall be furnished with a dry contact wired to terminal blocks.
15. The electronic pressure switch shall be equipped with an electronic comparator and solid state output relay to alert maintenance personnel to a low liquid level in the wet well. An indicator, visible on the front of the control panel, shall indicate that a low wet well level exists. The alarm signal shall be maintained until the cause for the low wet well level has been corrected and the circuit has been manually reset. A low liquid level condition shall disable both pump motors. When the wet well rises above the low level point, both pump

motors shall be automatically enabled. Low water alarm shall be furnished with a dry contact wired to terminal blocks.

16. Integrinex Standard Analog Output circuit will be furnished with transient voltage surge suppression to protect related equipment from induced voltage spike from lighting.

F. An alarm silence pushbutton and relay shall be provided to permit maintenance personnel to de-energize the audible alarm device while corrective actions are under way. After silencing the alarm device, manual reset of the alarm condition shall clear the alarm silence relay automatically. The pushbutton shall be a membrane style button integral to the Integrinex Standard level controller.

G. Air Bubbler System

1. The level control system shall be the air bubbler type, containing air bubbler piping which extends into the wet well. A pressure sensor contained within the electronic pressure switch shall sense the air pressure in this piping to provide wet well level signals for the remainder of the level control system.
2. Two vibrating reed, industrial rated, air pumps shall be furnished to deliver free air at a rate of approximately 5 cubic feet per hour and a pressure not to exceed seven (7) psi. Liquid level control systems utilizing air compressors delivering greater quantities of air at higher pressures, requiring pressure reducing valves, air storage reservoirs, and other maintenance nuisance items will not be acceptable. A selector switch shall be furnished to provide manual alternation of the air pumps. The switch shall be connected in such a manner that either pump may be selected to operate continuously. The selector switch shall be oil-tight design with contacts rated NEMA A300 minimum.
3. An air bell constructed of PVC 3-inches in diameter shall be provided for installation at the outlet of the air bubbler line in the wet well. The air bell shall have a 3/8" NPT tapped fitting for connection to the bubbler line.
4. An air flow indicator gauge shall be provided and connected to the air bubbler piping to provide a visual indication of rate of flow in standard cubic feet per hour.

H. Redundant High Water Alarm

1. A separate float switch shall be used to alert maintenance personnel to a redundant high water level in the wet well. Should the water level rise to the "alarm" level, the float switch shall provide a dry contact digital input to the monitoring system. The alarm signal shall be maintained until wet well level is lowered.
2. A stainless steel chain and an anchor shall be provided for the float.

I. Monitoring System Interface

1. The station control system shall provide the following alarm and status contacts. Digital outputs shall be N.O. dry contacts. Analog outputs shall be surge protected 4-20 mA signals. Retransmitted outputs shall be as noted.

2. Digital outputs
 - a. Pump 1 RUN
 - b. Pump 2 RUN
 - c. Pump 1 Fault including overload, seal fault and high pump temperature
 - d. Pump 2 Fault including overload, seal fault and high pump temperature
 - e. Utility power fault
 - f. High water alarm
 - g. Low water alarm
 - h. Redundant high water alarm
 - i. Low station temperature alarm
3. Analog outputs
 - a. Wet well level in feet

2.11 CELLULAR DATA BASED MONITORING SYSTEM

- A. The station manufacturer shall mount and wire an owner supplied Omni-Site Crystal Ball™ cellular data based monitoring system.
 1. A dedicated circuit breaker shall be provided.
 2. I/O wiring shall be 18/2 shielded for analog and digital channels.
 3. A wall sleeve with interior and exterior cord grips shall be provided for the external antenna cable. Antenna mounting will be done by the owner.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Contractor shall off-load equipment at installation site using equipment of sufficient size and design to prevent injury or damage. Station manufacturer shall provide written instruction for proper handling. Immediately after off-loading, contractor shall inspect complete pump station and appurtenances for shipping damage or missing parts. Any damage or discrepancy shall be noted in written claim with shipper prior to accepting delivery. Validate all station serial numbers and parts lists with shipping documentation. Notify the manufacturer's representative of any unacceptable conditions noted with shipper.

3.2 INSTALLATION

- A. Install, level, align, and lubricate pump station as indicated on project drawings. Installation must be in accordance with written instructions supplied by the manufacturer at time of delivery.

- B. Suction pipe connections must be vacuum tight. Fasteners at all pipe connections must be tight. Install pipe with supports and thrust blocks to prevent strain and vibration on pump station piping. Install and secure all service lines (level control, air release valve or pump drain lines) as required in wet well.
- C. Check motor and control data plates for compatibility to site voltage. Install and test the station ground prior to connecting line voltage to station control panel.
- D. Prior to applying electrical power to any motors or control equipment, check all wiring for tight connection. Verify that protective devices (fuses and circuit breakers) conform to project design documents. Manually operate circuit breakers and switches to ensure operation without binding. Open all circuit breakers and disconnects before connecting utility power. Verify line voltage, phase sequence and ground before actual start-up.
- E. After all anchor bolts, piping and control connections are installed, completely fill the grout dam in the pump station base with non-shrink grout.

3.3 FIELD QUALITY CONTROL

A. Operational Test

- 1. Prior to acceptance by owner, an operational test of all pumps, drives, and control systems shall be conducted to determine if the installed equipment meets the purpose and intent of the specifications. Tests shall demonstrate that all equipment is electrically, mechanically, structurally, and otherwise acceptable; it is safe and in optimum working condition; and conforms to the specified operating characteristics.
- 2. After construction debris and foreign material has been removed from the wet well, contractor shall supply water volume adequate to operate station through several pumping cycles. Observe and record operation of pumps, suction and discharge gauge readings, ampere draw, pump controls, and liquid level controls. Check calibration of all instrumentation equipment, test manual control devices, and automatic control systems.

B. Manufacturer's Start-up Services

- 1. Coordinate station start-up with manufacturer's technical representative. The representative or factory service technician will inspect the completed installation. Calibrate and adjust instrumentation, correct or supervise correction of defects or malfunctions, and instruct operating personnel in proper operation and maintenance procedures.

3.4 CLEANING

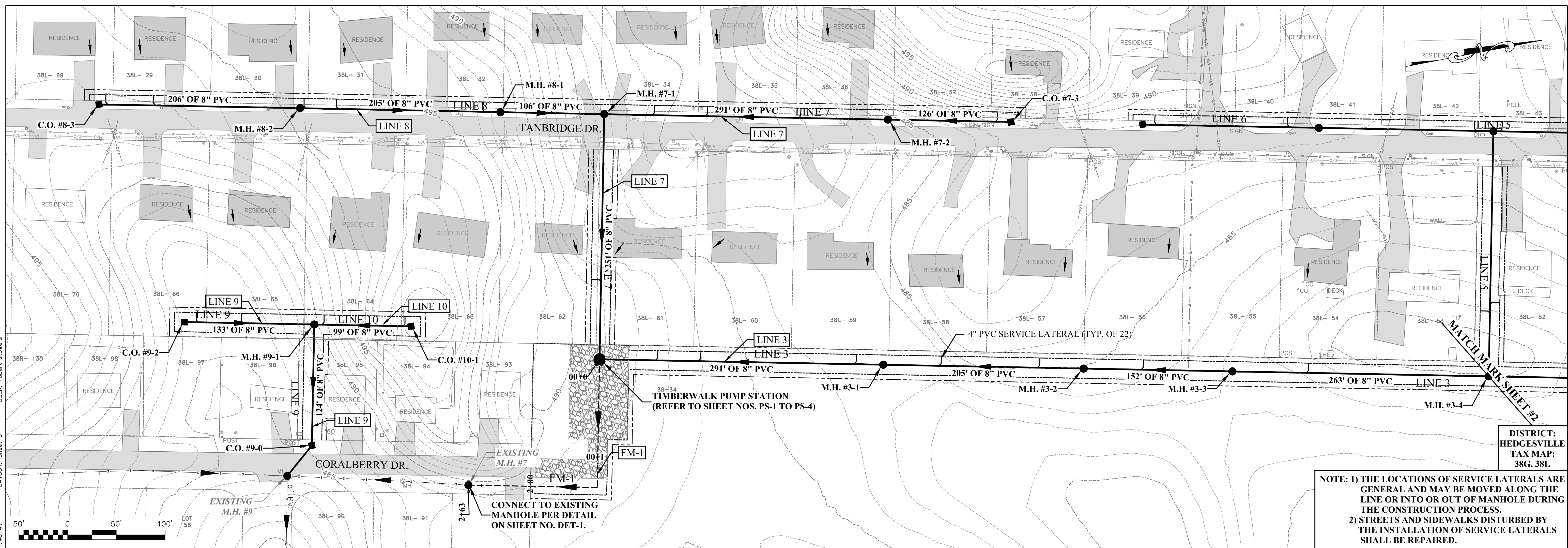
- A. Prior to acceptance, inspect interior and exterior of pump station for dirt, splashed material or damaged paint. Clean or repair accordingly. Remove from the job site all tools, surplus materials, scrap and debris.

3.5 PROTECTION

- A. The pump station should be placed into service immediately. If operation is delayed, station is to be stored and maintained per manufacturer's written instructions.

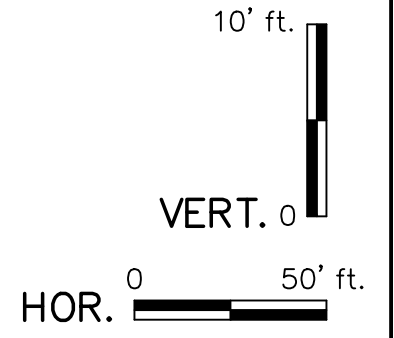
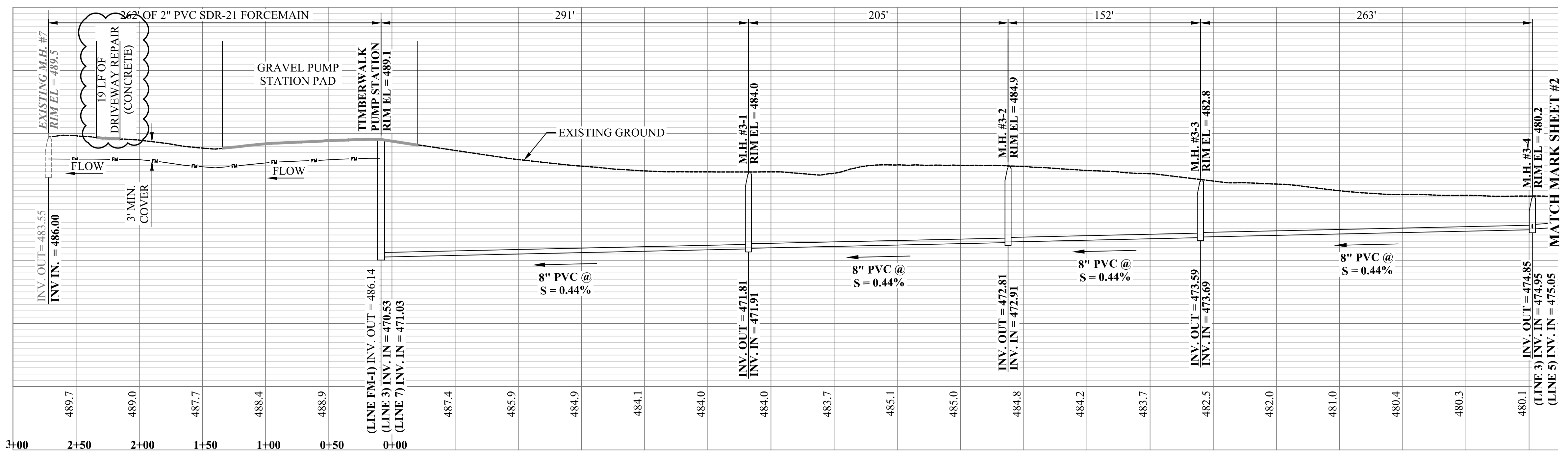
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 PLOT DATE/TIME: 3/12/2020 11:40 AM
 LAYOUT: Sheet 3
 USER: robert stowers



DISTRICT:
 HEDGESVILLE
 TAX MAP:
 38G, 38L

NOTE: 1) THE LOCATIONS OF SERVICE LATERALS ARE GENERAL AND MAY BE MOVED ALONG THE LINE OR INTO OR OUT OF MANHOLE DURING THE CONSTRUCTION PROCESS.
 2) STREETS AND SIDEWALKS DISTURBED BY THE INSTALLATION OF SERVICE LATERALS SHALL BE REPAIRED.



LINE-3

ADDENDUM NO. 1

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NO.	BY	DATE	DESCRIPTION
1	CLW	3/11/20	ADDENDUM NO. 1

SCALE: AS NOTED
 DRAWN: C. WILKINSON DATE: 8/2018
 CHECKED: J. EKSTROM DATE: 8/2018
 APPROVED: J. EKSTROM DATE: 8/2018
 SURVEY DATE:
 SURVEY BY:
 FIELD BOOK No.:

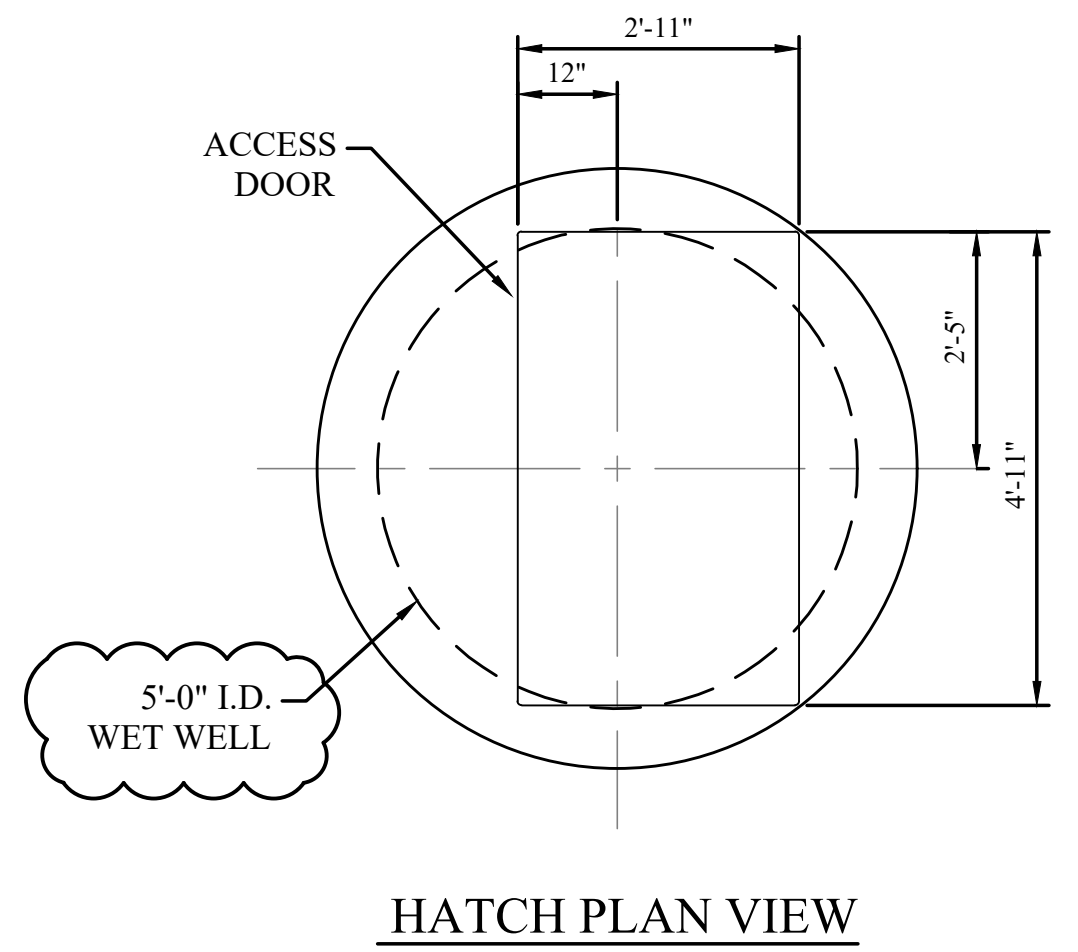
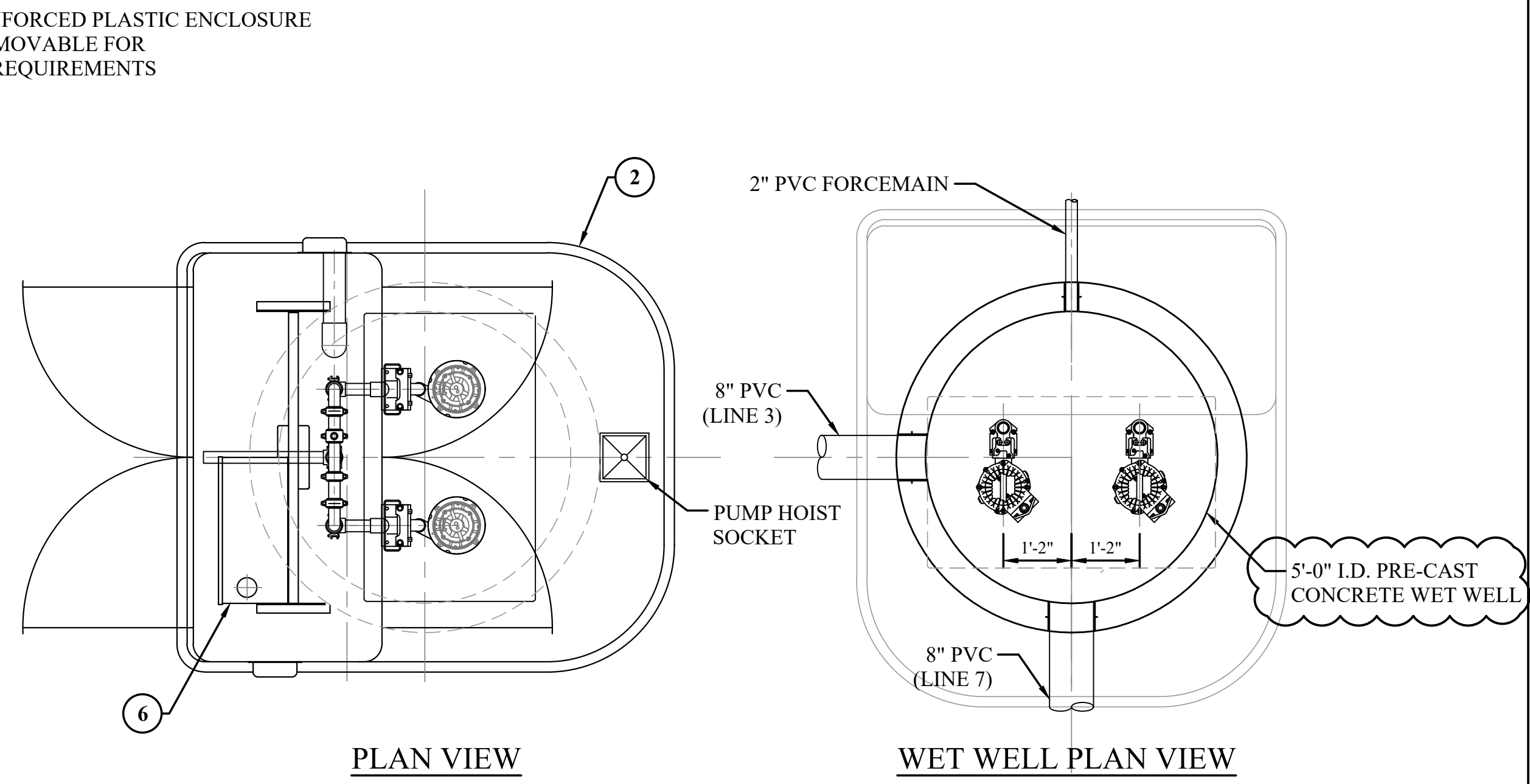
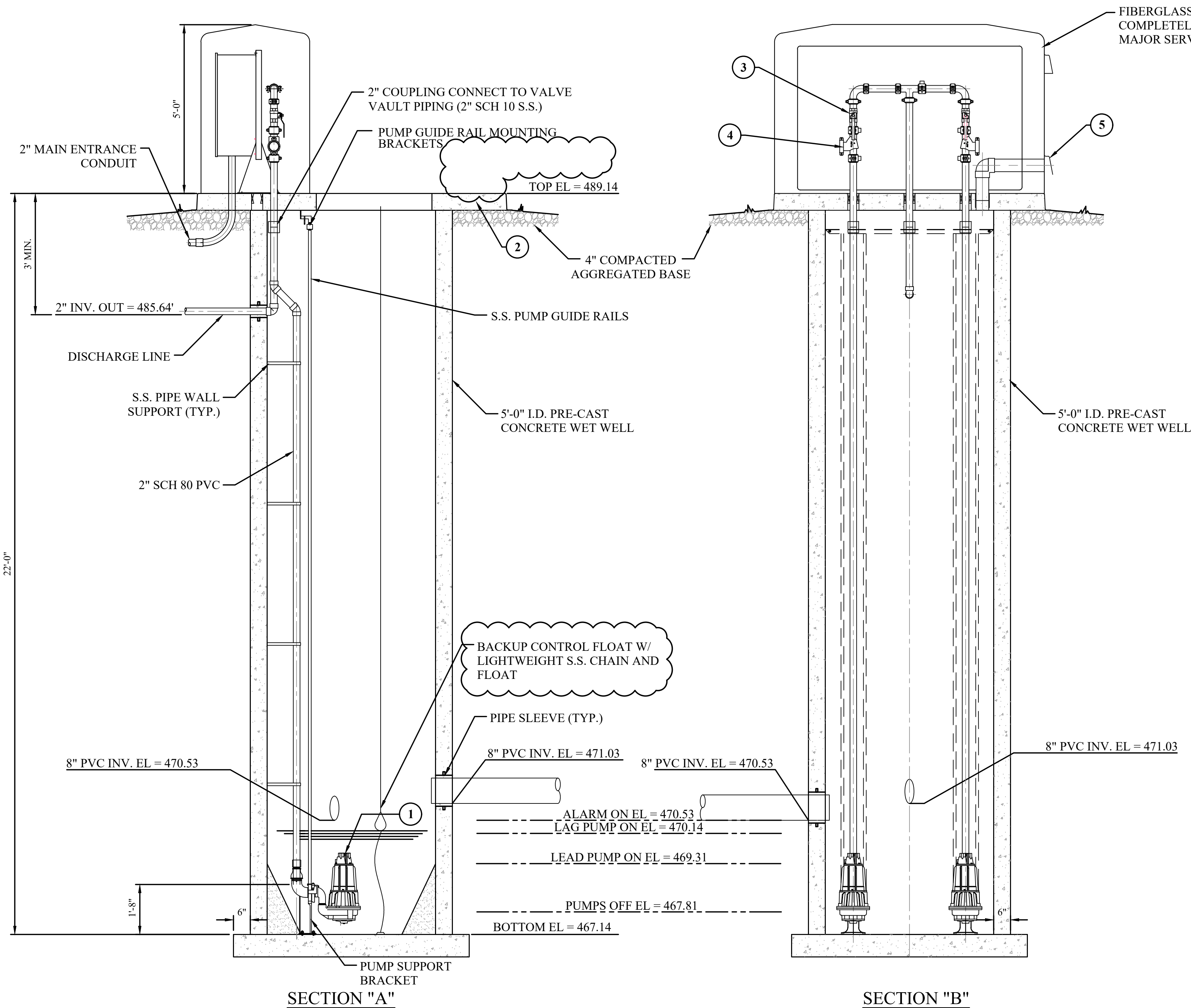
THRASHER
 300 ASSOCIATION DRIVE
 CHARLESTON, WV 25311
 www.thrashereng.com
 PHONE (304)-343-7601 FAX (304)-343-7604

PHASE No.	
CONTRACT No.	7
PROJECT No.	202-020-1533

BERKELEY COUNTY PSSD
 BERKELEY COUNTY, WEST VIRGINIA
 TIMBERWALK SANITARY SEWER
 EXTENSION PROJECT
 PLAN AND PROFILE

SHEET No.
3

CAD FILE: R:\020-1533-TIMBERWALK SUBDIVISION-BERKELEY COUNTY PSSD-000-SHEET PS-Details.dwg
 PLOT DATE/TIME: 3/12/2020 2:35 PM
 LAYOUT: PS-2
 USER: robert.stowers



ITEM	DESCRIPTION	MATERIAL & SIZE
1	GRINDER PUMP	ZOELLER, MYERS
2	FRP BASE	CONCRETE
3	PLUG VALVE	CAST IRON 2"
4	CHECK VALVE	CAST IRON 2"
5	WET WELL VENT W/S.S. SCREEN	PVC 4"
6	CONTROL PANEL	STAINLESS STEEL
7	OPW ADAPTER	ALUMINUM 2"

100 YEAR FLOOD ELEVATION- 462.00'

ADDENDUM NO. 1

PUMP STATION INFORMATION TABLE								
PUMP STATION	SITE PLAN SHEET No.	WET WELL SCHEDULE			DISCHARGE PIPING € ELEV.	INFLUENT GRAVITY SEWER	INFLUENT GRAVITY SEWER	GRADE ELEV.
		DIAMETER	TOP ELEV.	BOT ELEV.		8"	8"	
TIMBERWALK	PS-1	5'-0"	489.14	467.14	485.54	470.53	471.03	489.14

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NO.	BY	DATE	DESCRIPTION
1	CLW	3/11/20	ADDENDUM NO. 1

SCALE: 1/2" = 1'-0"
 DRAWN: CLW DATE: 10/2018
 CHECKED: J. EKSTROM DATE: 10/2018
 APPROVED: J. EKSTROM DATE: 10/2018
 SURVEY DATE:
 SURVEY BY:
 FIELD BOOK No.:

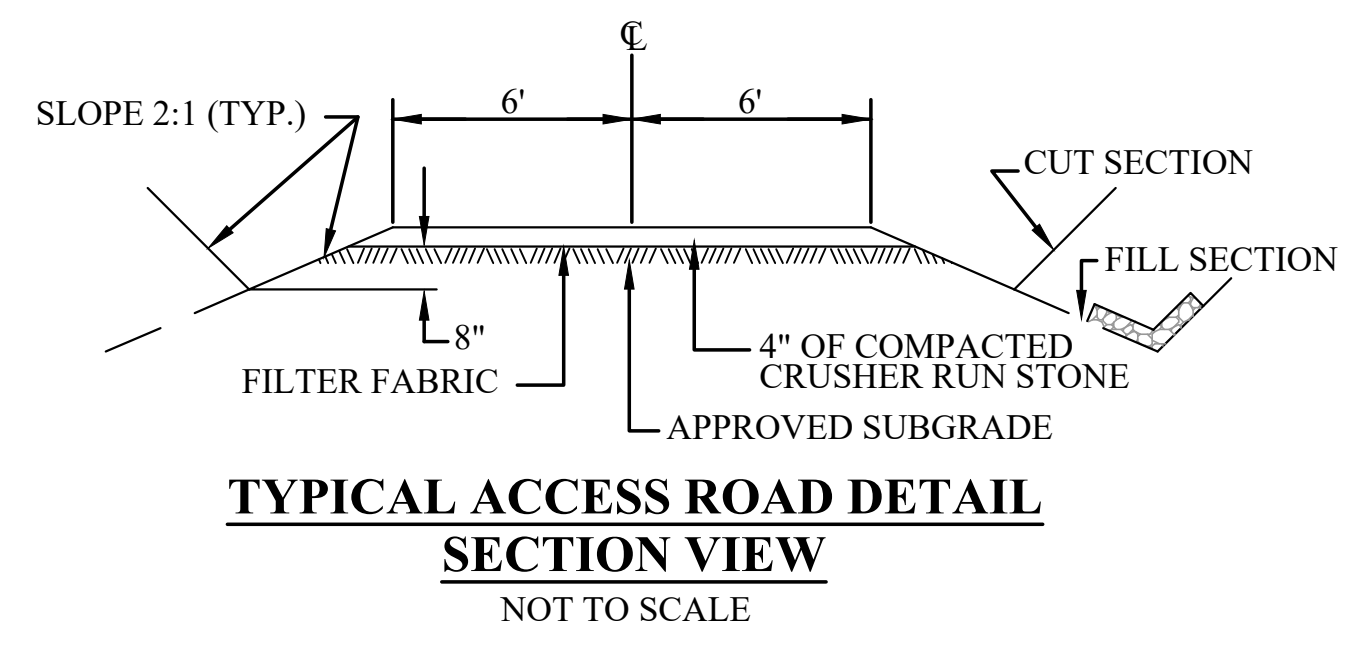
THRASHER
 300 ASSOCIATION DRIVE
 CHARLESTON, WV 25311
 www.thrashergroup.com
 PHONE (304)-343-7601
 FAX (304)-343-7604

PHASE No.
 CONTRACT No. 7
 PROJECT No. 020-1533

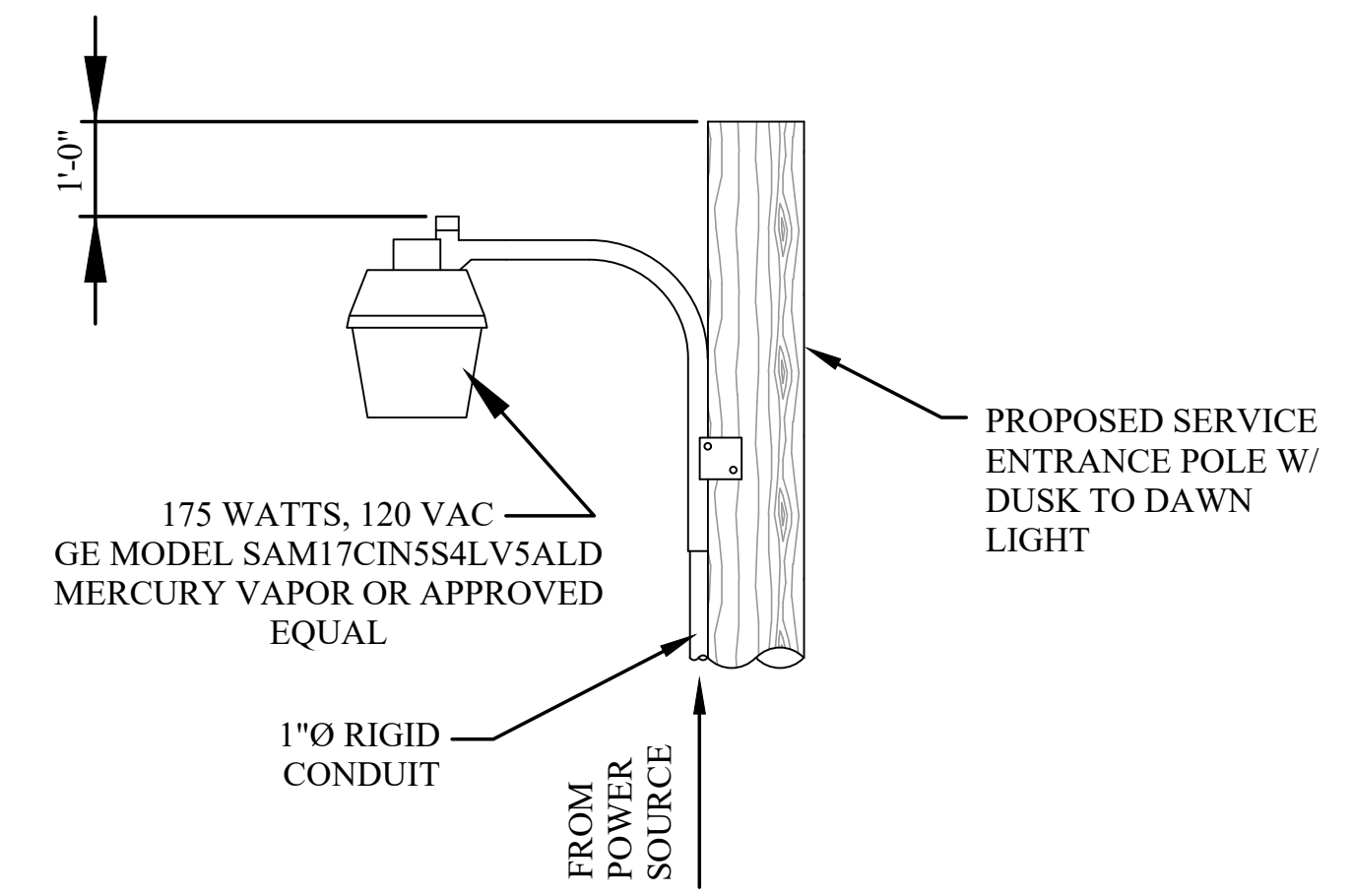
**BERKELEY COUNTY PSSD
 BERKELEY COUNTY, WEST VIRGINIA
 TIMBERWALK SANITARY SEWER
 EXTENSION PROJECT
 TIMBERWALK PUMP STATION DETAILS**

SHEET No. **PS-2**

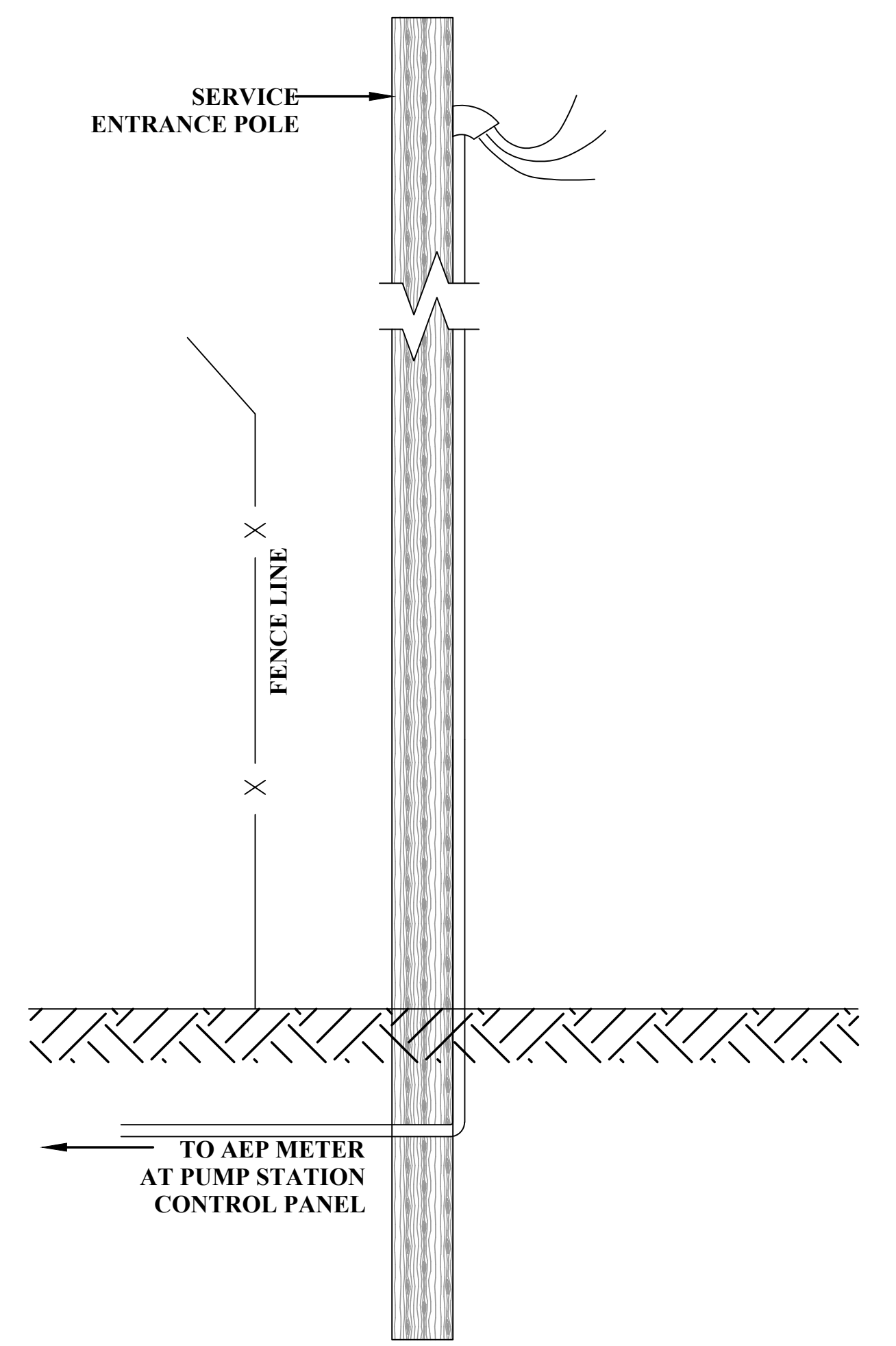
CAD FILE: R:\020-1533-TIMBERWALK SUBDIVISION-BERKELEY COUNTY PSSD-Drawing\000-SHEET PS Detail.dwg
 PLOT DATE/TIME: 3/12/2020 10:30 AM
 LAYOUT: PS-3
 USER: robert stowers



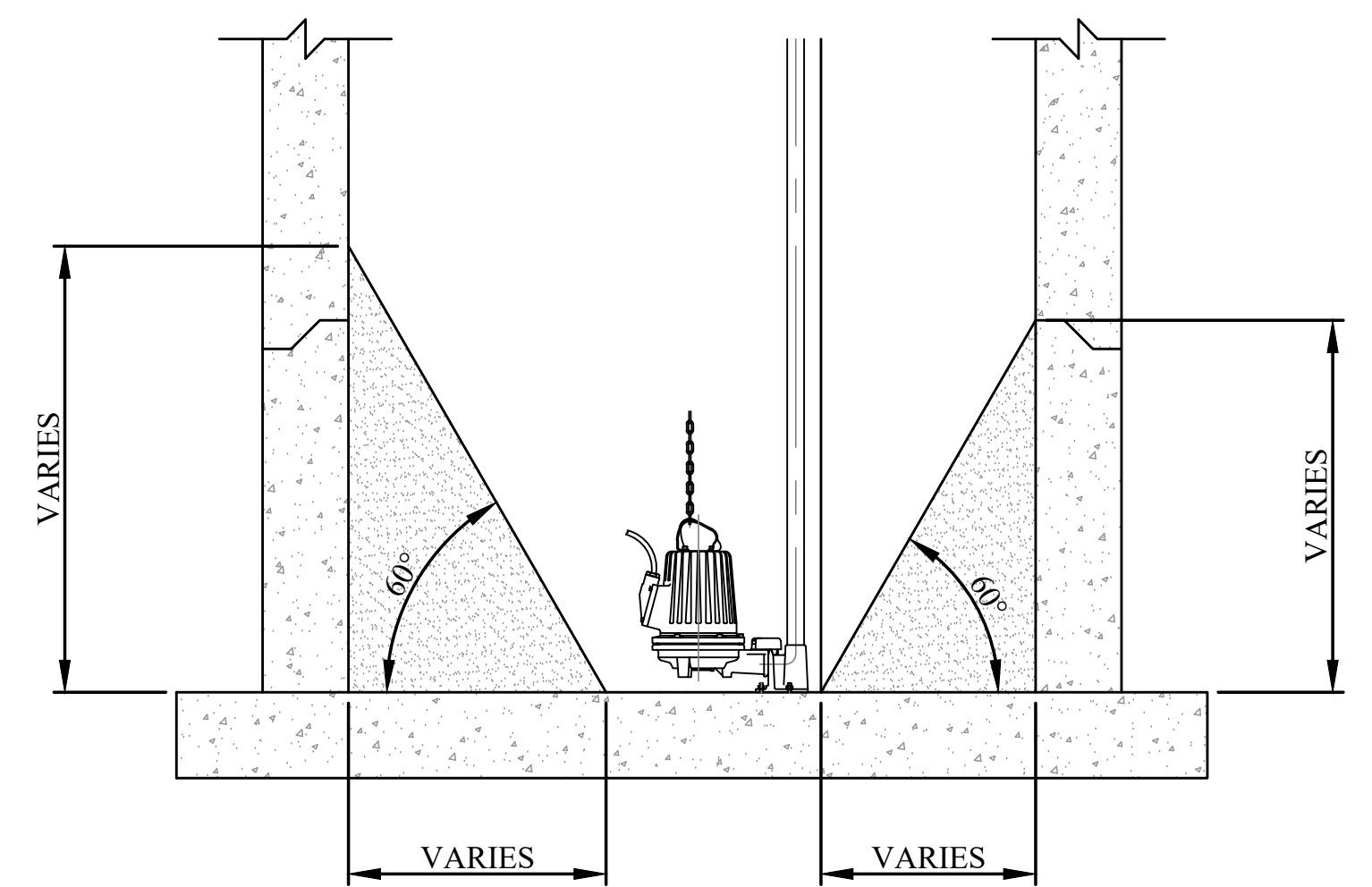
TYPICAL ACCESS ROAD DETAIL
SECTION VIEW
 NOT TO SCALE



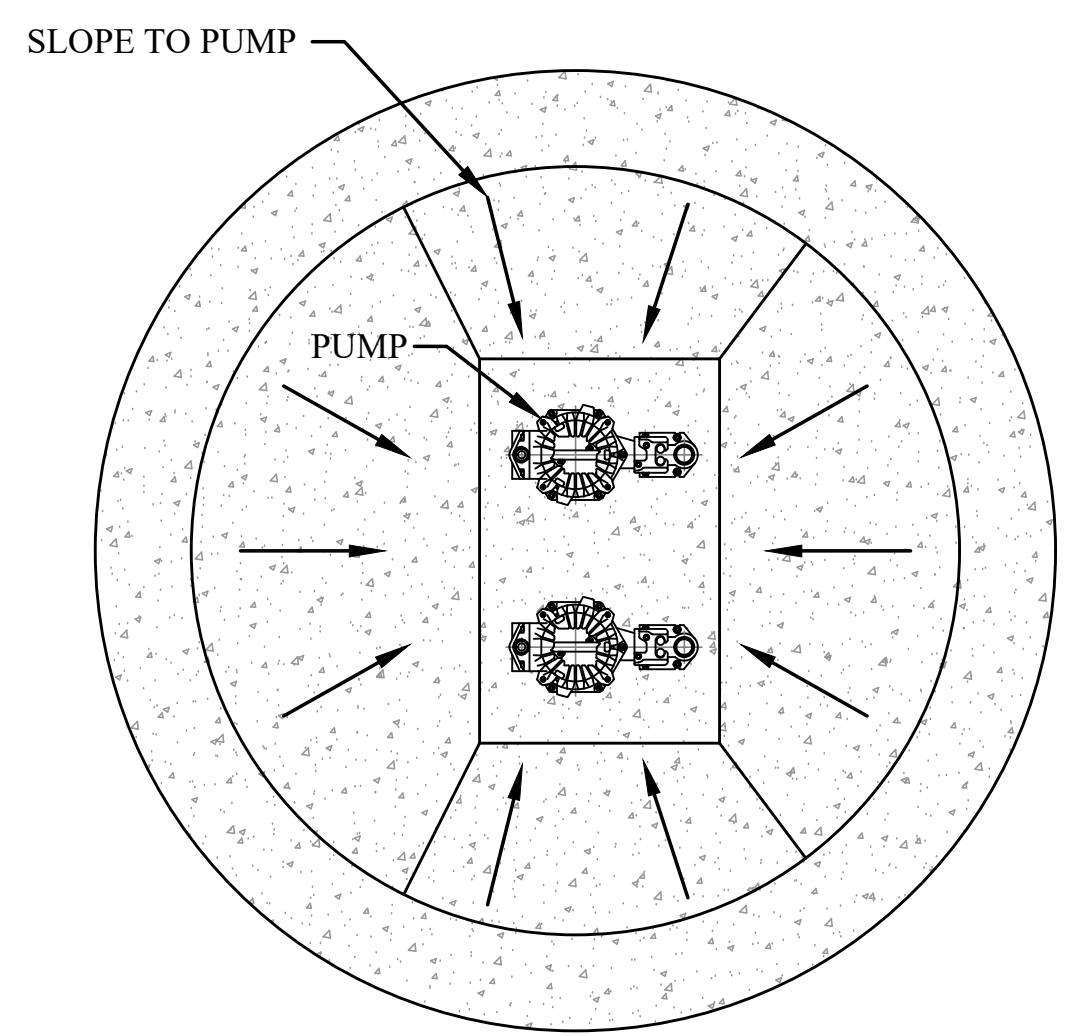
DUSK TO DAWN LIGHT DETAIL



DETAIL OF SERVICE ENTRANCE POLE
 NOT TO SCALE



WET WELL CONCRETE SLOPE DETAIL
SECTION VIEW
 NOT TO SCALE



WET WELL CONCRETE SLOPE DETAIL
PLAN VIEW
 NOT TO SCALE

ADDENDUM NO. 1

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1	CLW	3/11/20	ADDENDUM NO. 1
NO.	BY	DATE	DESCRIPTION

SCALE: 3/4" = 1'-0"
DRAWN: CLW
CHECKED: J. EKSTROM
APPROVED: J. EKSTROM
SURVEY DATE:
SURVEY BY:
FIELD BOOK No.:

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

PHASE No.
CONTRACT No.
7
PROJECT No.
020-1533

BERKELEY COUNTY PSSD
BERKELEY COUNTY, WEST VIRGINIA
TIMBERWALK SANITARY SEWER
EXTENSION PROJECT
PUMP STATION DETAILS

SHEET No.
PS-3

"General Decision Number: WV20200034 03/06/2020

Superseded General Decision Number: WV20190034

State: West Virginia

Construction Type: Building

County: Berkeley County in West Virginia.

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.80 for calendar year 2020 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 \$10.80 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 2020. 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	01/03/2020
1	01/31/2020
2	02/07/2020
3	02/21/2020
4	02/28/2020
5	03/06/2020

ASBE0024-003 04/01/2019

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 36.53	16.42+a

a. PAID HOLIDAYS: New Year's Day, Martin Luther King Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the day after Thanksgiving and Christmas Day provided the employee works the regular work day before and after the paid holiday.

ASBE0024-014 04/01/2019

	Rates	Fringes
FIRESTOPPER.....	\$ 29.16	7.98+a

Includes the application of materials or devices within or around penetrations and openings in all rated wall or floor assemblies, in order to prevent the passage of fire, smoke of other gases. The application includes all components involved in creating the rated barrier at perimeter slab edges and exterior cavities, the head of gypsum board or concrete walls, joints between rated wall or floor components, sealing of penetrating items and blank openings.

a. PAID HOLIDAYS: New Year's Day, Martin Luther King Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the day after Thanksgiving and Christmas Day provided the employee works the regular work day before and after the paid holiday.

BOIL0667-005 03/01/2018

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

BRWV0009-007 12/01/2019

	Rates	Fringes
TILE SETTER.....	\$ 29.93	24.38

BRWV0015-007 06/01/2018

	Rates	Fringes
BRICKLAYER.....	\$ 28.00	21.03

BRWV0015-011 06/01/2018

	Rates	Fringes
MASON - STONE.....	\$ 29.59	21.88

BRWV0015-014 06/01/2018

	Rates	Fringes
TILE FINISHER.....	\$ 23.59	19.95

CARP0443-009 12/01/2019

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

CARP1024-007 12/01/2017

	Rates	Fringes
CARPENTER (Including Drywall Finishing/Taping, Drywall Hanging and Form Work).....	\$ 28.05	17.10

ELEC0307-012 06/01/2019

	Rates	Fringes
ELECTRICIAN (Including Low Voltage Wiring).....	\$ 33.90	17.74

ELEV0100-001 01/01/2019

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 47.06	33.705

PAID HOLIDAYS:

a. New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving, and Christmas Day.

b. Employer contributes 8% of regular hourly rate to vacation pay credit for employee who has worked in business more than 5 years; 6% for less than 5 years' service.

ENGI0132-009 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, Mechanics with tools with 3/4 inch drive and below

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

GROUP 3: Bulldozer, Forklift, Non-Farm Type Tractor, all other Cranes, all other Mechanics

GROUP 4: Bobcat/Skid Steer/Skid Loader, Farm Type Tractor, Loader

IRON0549-007 12/01/2018

	Rates	Fringes
IRONWORKER (Ornamental and Reinforcing).....	\$ 33.34	20.81

IRON0568-011 05/01/2018

	Rates	Fringes
IRONWORKER (Sheeting and Structural).....	\$ 28.56	20.61

LAB00379-009 12/01/2017

	Rates	Fringes
LABORER		
Group 1.....	\$ 21.58	15.75
Group 2.....	\$ 21.94	15.75
Group 3.....	\$ 22.37	15.75

LABORER CLASSIFICATIONS

GROUP 1: Carpenter Tender, Common or General, Demolition

GROUP 2: Concrete Saw (Hand held/Walk Behind), Mason Tender-Brick, Mason Tender-Cement/Concrete, Mortar Mixer, Scaffold Builder (Brick and Masonry), Skytrak Forklift Operator

GROUP 3: Pipelayer

PLAS0926-002 06/01/2018

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

PLUM0486-009 12/16/2018

	Rates	Fringes
PLUMBER.....	\$ 40.10	19.89

ROOF0034-003 05/01/2019

	Rates	Fringes
ROOFER.....	\$ 29.00	13.71

SHEE0100-006 05/01/2019

	Rates	Fringes
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SHEET METAL WORKER (Includes HVAC Duct Installation)		
0-40 miles from City Hall, Cumberland, Maryland.....	\$ 25.24	22.17
41-65 miles from City Hall, Cumberland, Maryland..	\$ 26.24	22.17
66+ miles from City Hall, Cumberland, Maryland.....	\$ 27.24	22.17

TEAM0175-005 10/01/2019

	Rates	Fringes
Truck drivers:		
GROUP 2.....	\$ 29.30	17.81
GROUP 3.....	\$ 29.45	17.81

TRUCK DRIVER CLASSIFICATIONS

GROUP 2 - Dump Truck (Up to 5 cu. yds.), Water Tank Truck
(Straight)

GROUP 3 - Dump Truck (5 cu. yds. & over), Tractor Haul Truck,
Water Tank Truck (Semi)

* UAVG-WV-0027 01/01/2019

	Rates	Fringes
LABORER (Power Tool Operator)....	\$ 22.81	16.50

SUWV2012-032 08/13/2012

	Rates	Fringes
GLAZIER.....	\$ 23.20	4.02
OPERATOR: Backhoe.....	\$ 21.51	7.36
OPERATOR: Excavator.....	\$ 23.27	11.95
PAINTER: Brush, Roller and Spray.....	\$ 22.33	9.95
PIPEFITTER.....	\$ 25.76	19.46
SPRINKLER FITTER (Fire Sprinklers).....	\$ 30.96	15.81

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

=====

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.

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)).

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.

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.

=====
END OF GENERAL DECISION"

"General Decision Number: WV20200063 01/24/2020

Superseded General Decision Number: WV20190063

State: West Virginia

Construction Type: Heavy

County: Berkeley County in West Virginia.

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.80 for calendar year 2020 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 \$10.80 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 2020. 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	01/03/2020
1	01/24/2020

CARP0441-007 12/01/2018

	Rates	Fringes
CARPENTER, Includes Form Work....	\$ 32.10	16.56

ELEC0307-008 06/01/2019

	Rates	Fringes
ELECTRICIAN.....	\$ 33.90	17.74

ENGI0132-017 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

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Cranes (All types, including Tower Cranes),
Excavators and shovels with an operating weight of one
hundred ten thousand (110,000) pounds and over.

GROUP 2: Compactor, Forklift, Grader/Blade, Mechanic,
Excavators and shovels with an operating weight of up to
one hundred ten thousand (110,000) pounds, Tractor, Trencher

GROUP 3: Roller.

IRON0549-013 12/01/2018

	Rates	Fringes
IRONWORKER, ORNAMENTAL AND STRUCTURAL.....	\$ 33.34	20.81

IRON0568-021 12/01/2017

	Rates	Fringes
IRONWORKER, REINFORCING.....	\$ 33.29	16.93

LABO0379-024 12/01/2017

	Rates	Fringes
LABORER:		
GROUP 1.....	\$ 26.17	16.50
GROUP 2.....	\$ 25.11	16.50

GROUP 1: Chain Saw, Concrete Saw (Hand Held/Walk Behind),
Concrete Worker, Hand Held Drill, Grade Checker, Mason
Tender-Cement/Concrete.

GROUP 2: Common or General, Flagger.

LABO1149-011 12/01/2017

	Rates	Fringes
LABORER:		
Asphalt Raker.....	\$ 26.17	16.75

* PAIN1144-006 12/01/2019

	Rates	Fringes
PAINTER: Spray.....	\$ 30.92	15.55

PLAS0926-001 06/01/2018

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

TEAM0175-006 12/07/2015

	Rates	Fringes
TRUCK DRIVER		
Flatbed Truck.....	\$ 30.98	15.98
Off the Road Truck.....	\$ 31.77	15.98
Tractor Haul Truck.....	\$ 31.77	15.98

* UAVG-WV-0013 01/01/2019

	Rates	Fringes
LABORER (Mortar Mixer).....	\$ 26.17	16.50

* UAVG-WV-0022 01/01/2019

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Drill).....	\$ 32.19	18.30

SUWV2012-061 08/13/2012

	Rates	Fringes
LABORER: Pipelayer.....	\$ 22.82	10.95
OPERATOR: Backhoe.....	\$ 24.39	15.50
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 24.75	14.94
OPERATOR: Boom.....	\$ 28.71	11.59
OPERATOR: Bulldozer.....	\$ 24.39	15.50
OPERATOR: Loader.....	\$ 27.06	15.50
OPERATOR: Oiler.....	\$ 22.03	14.64
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 24.39	15.50
Truck Driver, Dump (Excluding Off the Road Trucks).....	\$ 22.39	12.01

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

=====

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.

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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

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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.

WAGE DETERMINATION APPEALS PROCESS

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

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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
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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:

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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: WV20200080 01/03/2020

Superseded General Decision Number: WV20190080

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 \$10.80 for calendar year 2020 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 \$10.80 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 2020. 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	01/03/2020

SUWV2015-001 01/01/2014

Rates	Fringes
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BRICKLAYER

Barbour, Berkeley,
Doddrige, 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
POWER EQUIPMENT OPERATOR CLASSIFICATIONS:

18.60

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.

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.

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)).

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.

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" END OF GENERAL DECISION