


**PROPOSAL AND CONTRACT
(WHEN EXECUTED)**

INSTRUCTIONS ON PAGE 4

**THIS PROPOSAL INCLUDES
INSTRUCTIONS TO BIDDERS**
A. DEPOSIT OF PROPOSALS.

All envelopes containing Bid proposals shall
be clearly marked "Bid Proposal for letting of
9/23/2019 EWP Cohen ."

DATE

Dover Township, 2nd Class
MUNICIPALITY (NAME & TYPE)

Tiffany Strine
SECRETARY

Sealed Proposals will be received on or before
9:00 A.M. on the above Letting Date.

TIME

2480 West Canal Road
Dover, PA 17315
ADDRESS

Bids will be opened and read at approximately
9:00 A.M. , on the above Letting Date.

TIME

PROPOSALS MUST BE MAILED OR OTHERWISE
DELIVERED TO THE ABOVE ADDRESS.

- 1 The contractor proposes to furnish and deliver all materials (including Form CS-4171, CERTIFICATE OF COMPLIANCE and/ or TR-465 DAILY BITUMINOUS MIXTURE CERTIFICATION) and to do and perform all work on the following project as more specifically set forth in the Schedule of Prices (Attachment), in accordance with drawings and specifications on file at Dover Township, 2nd Class as well as the supplements and special requirements contained herein and/ or attached hereto and current PennDOT Specifications (Publication 408), except (a) bidders need not be prequalified by PennDOT (Sec.102.01), and (b) Volumetric testing of bituminous paving materials is not required (Sec. 409).
- 2 If designated as the successful bidder, the contractor will begin work on the date specified in the notice to proceed, or as otherwise provided in the special requirements, and will complete all work within **see attachment 1-A** calendar days.
- 3 Accompanying this proposal is a certified check or bid bond in the amount of 10% made payable to the municipality as a proposal guarantee which, it is understood, will be forfeited in case the contractor fails to comply with the requirements of the proposal.

B. PROPOSAL OF:

NAME / ADDRESS OF CONTRACTOR

CONTRACTORS CERTIFICATION

It is hereby certified as follows:

- 1 The only person interested in the proposal as principal (s) is (are):

- 2 None of the above persons are employees of the municipality.
- 3 This proposal is made without collusion with any other person, firm or corporation.
- 4 All plans and specifications referred to above and the site of the work have been examined by the contractor. The contractor understands that the quantities indicated herein are approximate and are subject to change as may be required; and that all work is payable on the basis of the unit price listed on the Schedule of Prices. (Attachment 1).

- 5 The contractor will comply with all requirements of the laws and implementing regulations of the Commonwealth of Pennsylvania and the United States relating to human relations, equal opportunity and non-discrimination in employment, and will pay to workmen employed in the performance of the contract the wages to which they may be entitled.
- 6 The contractor will provide the municipality with a performance bond, conditioned upon the faithful performance of the contract in accordance with the plans, specifications and conditions thereof, and a payment bond, conditioned on the prompt payment of all material furnished and labor supplied or performed in the prosecution of the work, in accordance with the Public Works Contractors' Bond Law of 1967; and an affidavit accepting the provisions of the Workmen's Compensation Act of 1915, as amended.

CONTRACTOR

BY: _____ DATE: _____
 TITLE: _____

WITNESSED OR ATTESTED BY: _____ DATE: _____
 TITLE: _____

TO BE EXECUTED ONLY IN THE EVENT THE ABOVE PROPOSAL IS ACCEPTED

ACCEPTED ON : _____
 DATE

Dover Township, 2nd Class
MUNICIPALITY

BY: _____
 TITLE: _____

BY: _____
 TITLE: _____

BY: _____
 TITLE: _____



ATTESTED BY: _____
 TITLE: _____



ATTACHMENT 1

TO MS - 944 (PROPOSAL AND CONTRACT MS - 944)

County: York

Municipality: Dover Township, 2nd Class

Project Number:

LOCATION OF WORK:

3083 Honey Run Drive, York, PA 17408, Dover Township, Richard Cohen Site.

DESCRIPTION OF WORK:

See Attachment 1-A and EWP Tool # 42-10-185023-025 (48 pages) for detailed description of each Item. This work is subject to the provisions of the Pennsylvania Prevailing Wage Act, serial number 19-06405 (11 pages attached).

ESCALATOR CLAUSE:(if adopted by Municipality.)

A Resolution was not adopted by the municipality as required by PennDOT Chapter 449.6. and an escalator clause may not be inserted by the contractor.

SCHEDULE OF PRICES

SCHEDULE OF PRICES					
Item No.	Approximate Quantities	Unit	*Description	Unit Price	Total
1	1	Each	Mobilization & Demobilization		
			Erosion & Sedimentation Control		
			Stream Diversion & Dewatering		
2	1	Each	Precast Modular Block, Compacted Backfill,		
			Excavation, Geotextile & Drain Fill		
3	1	Each	Toe Protection, R-6, Left & Right Bank		
4	1	Each	Riprap, Excavation & Geotextile		
5	1	Each	Gravel Bar Removal		
			Debris, Brush, & Tree Removal, Excavation		
6	1	Each	Seeding & Stabilization		
			Seeding & ECB installation, Fall		
			Protection Fence		

*** DESCRIPTION:**

**Must include ADT on wearing surfaces
USE OF CUTBACK ASPHALT IS PROHIBITED
BETWEEN MAY 1st AND OCTOBER 31st, EXCEPT
AS NOTED IN BULLETIN NO. 25.
FOR OPTION OR PHASE BIDS THE TOTALS FOR
EACH MUST BE INCLUDED.**

	SUBTOTAL	
SUBTOTAL FROM OTHER ATTACHMENTS		
BID TOTAL FOR A NON OPTION / PHASE BID		
OPTION 1 OR PHASE 1 BID TOTAL		
OPTION 2 OR PHASE 2 BID TOTAL		
OPTION 3 OR PHASE 3 BID TOTAL		

THIS PORTION TO BE COMPLETED
BY THE MUNICIPALITY

**SPECIAL PROVISIONS TO CONTRACT MS-944 (Attachment 1-A)
CONTAINS IMPORTANT INFORMATION FOR THE CONTRACTOR**

The Prime Contractor and subcontractors must comply with all of the following provisions that are marked with an "X".

- X Traffic Control and Safety Devices to be provided by the Contractor.
(Maintenance and Protection of Traffic to comply with current MUTCD, Publication 212 and Publication 213.)
- X Delivery tickets for all materials.
- X CS-4171 Certificate of Compliance and/ or TR-465 Daily Bituminous Mixture Certification required for all materials.
- X Notify the Municipality 5 working days prior to start of project.
- X Work to be completed on or before 12/20/2019 . After 12/20/2019 Liquidated damages apply at the rate of \$ 870.00 per calendar day.
- X Roadway to be power broomed by (contractor ☒ municipality ☐) prior to start of project.
- X Excess material to be removed by (contractor ☒ municipality ☐)
- X Municipality to inspect project.
- Need Bill of Lading for each shipment of bituminous material per Section 702.1(c) of Specifications 408.
- Tack Coat required per Section 460, or 409 for superpave, of Specifications 408 and is incidental to paving item unless noted otherwise.
- Prime Coat required per Section 461 of Specifications 408.
- Bituminous Seal on all abutting pavement and curbs required.
- Saw cut or Milled Paving Notch required and incidental to paving item unless noted otherwise.
- Scratch/ Leveling Courses to be placed at the discretion of appointed inspector(s).
- Full width pavement with one pass required.
- Municipality reserves the right to limit work completed.
- Taper pavement the last 3 feet to curb.
- For FOB Source bids, hauling distance will determine selection of bid award.
- Municipality reserves the right to procure material which best suits their requirements after all bids and items are reviewed.
- X Incidental Preparation and clean up required. (Project Construction Materials)
The municipality reserves the right to make an award on the basis of the aggregate total for all like items on which quotations are received.
Provide design, which meets Specifications Form 408 to the municipality 5 days prior to start of work.
- X Contractor responsible for defects that occur within one year of applications.
Contractor required to review proposed project with Municipality's Representative prior to bidding.
Oil Samples required from each distributor truck by contractor (1) one quart : A.M. & P.M. and witnessed by municipality and retained by municipality. (Oil samples must be placed in an approved type container that is compatible with oil sample.)
At least three random stone samples to be taken by contractor on project site witnessed by municipality and retained by municipality.
Complete all testing in accordance with Specification Form 408 Section 409 except for superpave volumetric testing.
Notice to Proceed will be the date of Contract acceptance.
- X Final Completion Certificate & Notice of Completion required.
- X Future award of Contract will be based on quality of work as determined by the municipality.
- X Contractor, notify all residents of pending work to be performed.
- X Work shall be completed, Monday through Friday, between 6 A.M. and 6 P.M.
- X Payment request will be deferred until the end of the project & after the Township receives payment from DEP & USDA.
- X DEP & USDA to inspect project.
- X USDA applied for Emergency Permit from DEP.

My signature signifies that I have read and understand the above special provisions to this contract, and by being authorized by this company to act as their authorized representative, and on their behalf hereby agree to adhere to any and all of the provisions pertaining to this contract.

_____ Contractor's Representative	_____ Date
_____ Company	

_____ Municipality's Representative	_____ Date
Dover Township, 2nd Class	
_____ Municipality	

PROPOSAL AND CONTRACT INSTRUCTIONS- FORM 944

- 1 The proposal must be typewritten or printed.
- 2 If more than one proposal on any project is submitted by an individual, firm or partnership, corporation or association under the same or different names, only one lowest proposal will be considered.
- 3 Description of Work- - -

A. If additional space is needed, insert appropriately numbered attachment and note "Continued on attached work sheets."
- 4 Part A of Page 1 to be completed by municipality. Part B of Page 1 to be completed by contractor. Schedule of Prices - Column #1 (Item), #2 (Approximate quantities), #3 (Unit, i.e., ton, square yard, linear feet, etc.) And #4 (Description, i.e., bituminous materials - 9.5 mm S & L, 12.5 mm Wearing, 25.0 mm Base Course, etc.) Must be filled in by the municipality to insure equitable bidding. Columns #5 (Unit Price), #6 (Total) and total amount of bid, must be filled in by the contractor. If more space is needed, add note at the bottom of the page; "Continued on Attachment No. 1-A", and add additional sheet designated as Attachment No. 1-A, 1-B, etc.. Repeat for each additional sheet required. As required by Publication 408, Section 102.06(e), each bidder must submit a completed Form 7126 - Anti-Collusion Affidavit with its bid proposal.
- 5 If liquidated damages are to be assessed, add the following sentence to Part A #2. If all work is not completed on time, liquidated damages will be assessed at the rate of \$870.00 per additional working day. (OR "... as set forth in the attached schedule.")
- 6 Payment and Performance bonds are provided only by the successful bidder. Contracts from \$4,000.00 up to \$5,000.00 in Second Class Townships - performance bond must be not less than 10% or greater than 100% of amount of contract. Contracts greater than \$1,500.00 up to \$10,000.00 in First Class Townships, Boroughs and Third Class Cities - bonds must be between 50 % to 100% of the contract amount. Contracts in excess of \$5,000.00 in Second Class Townships and in excess of \$10,000.00 in First Class Townships, Boroughs and Third Class Cities - bonds must be in 100% of the amount of the contract. Bond Forms MS-944 Attachments 2 and 3 and Workmen's Compensation Affidavit - Attachment 4 must be submitted by the successful bidder within 20 days of the contract award. Failure to submit the bonds shall constitute grounds to cancel the contract.
- 7 *Construction projects, where the estimated cost of the total project exceeds \$25,000, are subject to the provisions of the Pennsylvania Prevailing Wage Act 442. It is the responsibility of the municipality to obtain the Prevailing Wage Scale for the area and include it in the proposal. If the Prevailing Wage Act applies, this fact shall be noted in the advertisement.

On projects utilizing Federal Revenue Sharing Funds, if the project cost exceeds \$2,000 and is financed with 25% or more Federal Revenue Sharing Funds, the Davis Bacon Act applies. Again, it is the responsibility of the municipality to obtain the Davis Bacon Wage Rates, include them in the proposal and note the fact in the advertisement. If both acts are applicable, The Davis Bacon Act has preference over the Pennsylvania Prevailing Wage Act.
- 8 An ESCALATOR CLAUSE is optional; if used, it must be included in the proposal prepared by the municipality. An escalator clause may not be inserted by the contractor.

*(1961, Aug. 15, P.L. 987; 43 P.S. 165)

**PERFORMANCE BOND
(With Corporate Surety)**



pennsylvania
DEPARTMENT OF TRANSPORTATION

KNOW ALL MEN BY THESE PRESENTS, That we,

(NAME AND ADDRESS OF CONTRACTOR)

as Principal and _____
(SURETY COMPANY)

a corporation incorporated under the laws of the State of _____ as Surety
(NAME OF STATE)

are held and firmly bound unto _____ in the full and just sum of
(NAME OF MUNICIPALITY)

_____ (\$ _____) dollars
lawful money to the United States of America, to be paid to the above Municipality or its assigns, to which payment well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the above bounden Principal has entered into a contract with the above Municipality, bearing even date herewith, for the undertaking of certain obligations as therein set forth.

NOW, THEREFORE, the condition of this obligation is such that if the above bounden Principal, as Contractor, shall in all respects comply with and faithfully perform the terms and conditions of said Contract, including the Specifications and conditions referred to and made a part thereof, and such alterations as may be made in said Specifications as therein provided, and shall well and truly, and in a manner satisfactory to the municipality fulfill all obligations as therein set forth, then this Obligation shall be void, but otherwise the same shall be and remain in full force, virtue and effect.

It is further provided that any alteration which may be made in the terms of the contractor or its specifications with the express approval of the Municipality or the Principal to the other, shall not in any way release the Principal and the Surety or either or any of them, their heirs, executors, administrators, successors or assigns from their liability hereunder, notice to the surety of any such alteration or forbearance being hereby waived.

IN WITNESS WHEREOF, the said Principal and Surety have duly executed this Bond under Seal, pursuant to due and legal action authorizing the same to be done on _____
(DATE OF BOND)

PLACE
SEAL
HERE

Attest / Witness:

CONTRACTOR

BY

TITLE:

TITLE:

PLACE
SEAL
HERE

Attest / Witness:

SURETY COMPANY

TITLE:

TITLE:



pennsylvania
DEPARTMENT OF TRANSPORTATION

KNOW ALL MEN BY THESE PRESENTS, that we

as PRINCIPAL and _____
a corporation incorporated under the laws of the State of _____ as SURETY, are
held and firmly bond unto the _____, in the full and just sum of
_____ (\$ _____) dollars, lawful money of the
United States of America, to be paid to the said _____ or its assigns, to which
payment well and truly to be made, we bind ourselves, our heirs, executors, administrators,
successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the above bounden Principal has entered into a contract with the above
municipality hereinafter called Obligee, bearing even date herewith, for the improvement of a
certain section of highway or bridge in said Municipality consisting of:

for approximately the sum of: _____ (\$ _____) dollars.

NOW, THEREFORE, the condition of this obligation is such that if the above bounden
PRINCIPAL shall and will promptly pay or cause to be paid in full all sums of money which may be
due by contract or otherwise, to any individual, firm, partnership, association or corporation, for all
material furnished or labor supplied or performed in the prosecution of the work, whether or not the
said for material or labor entered into and became component parts of the work and for rental of the
equipment used and services rendered by public utilities in, or in connection with the prosecution of
such work, then this obligation to be void, otherwise to remain in full force and effect.

The **PRINCIPAL** and **SURETY**, hereby, jointly and severally, agree with the Obligee herein
that any individual firm, partnership, association or corporation, which has performed labor or
furnished material in the prosecution of the work as provided, and any public utility which has not
been paid in full therefor, may sue in assumpsit on this Payment Bond in his, their, or its own name
and may prosecute the same to final for such sum or sums as may be justly due him, them or it, and
have execution thereon. Provided, however, that the Obligee shall not be liable for the payment of
any costs of expenses of such suit.

RECOVERY by any individual, firm, partnership, association or corporation hereunder shall
be subject to the provisions of the "Public Works Contractors' Bond Law of 1967", Act No. 385,
approved December 20, 1967, P.L. 869, which Act shall be incorporated herein and made a part
hereof, as fully and completely as though its provisions were fully and at length herein recited.

It is further provided that any alterations which may be made in the terms of the contract or
in the work to be done or materials to be furnished or labor to be supplied or performed under it or
the giving by the Obligee of any extension of time for the performance of the contract or any other
forebearance on the part of either the Obligee or the Principal to the other, shall not in any way
release the PRINCIPAL and the SURETY or SURETIES of any such alteration, extension of
forebearance being hereby waived.

IN WITNESS WHEREOF, the said PRINCIPAL and SURETY have duly executed this Bond
under seal this _____ day of _____, 20 ____.

PLACE
SEAL
HERE

WITNESS:

CONTRACTOR

TITLE:

BY:

TITLE:

PLACE
SEAL
HERE

WITNESS:

SURETY COMPANY

TITLE:

TITLE:



AFFIDAVIT RE

ACCEPTING PROVISIONS OF THE WORKMEN'S COMPENSATION ACT

State of

)

)

) ss:

)

County of

)

being duly sworn according to law deposes and says that they have
he has
it has

accepted the provisions of the Workmen's Compensation Act of 1915 of the Commonwealth of Pennsylvania, with

has his
its supplements and amendments, and have insured their liability thereunder in accordance with the terms of said
its

Act with

(SURETY COMPANY)

(TYPE OR PRINT)

CONTRACTOR

BY

SIGNATURE

Sworn to and subscribed before me this ____ day of _____ A.D. 20 ____ .

SIGNATURE

My Commission Expires

(DATE)

ANTI-COLLUSION AFFIDAVIT



County York

Municipality Dover Township, 2nd Class

Project Number _____

Fed. Project No. _____
(If Applicable)

State of _____

County of _____

The undersigned deponent deposes and says that he is the _____
of the _____ Company; that he is authorized to make this
affidavit on behalf of said company in compliance with section 102.06 (e) of Department Specifications,
Publication 408, as amended and that the said company has not, either directly or indirectly, entered
into any agreement, participated in any collusion, or otherwise taken any action in restraint of free
competitive bidding in connection with such contract.

(Contractor)

BY

Sworn to and subscribed before me the undersigned notary public this

_____ day of _____, _____.

Notary Public

My Commission expires _____

MS-NCP



pennsylvania

DEPARTMENT OF TRANSPORTATION

Dover Township, 2nd Class **MUNICIPALITY**

NOTICE OF COMPLETION

IN REFERENCE TO PROJECT # _____

Name of Contractor _____

Performance of work as specified on the above numbered contract is completed and final pavement inspection has been made by the contractor and municipality in accordance with the terms of the contract awarded.

DATE OF AWARD _____

Signature of Municipality

Signature of Contractor

Both copies of this form to be filled by the Contractor-Municipality on completion of final pavement restoration.

THIS PORTION TO BE COMPLETED BY MUNICIPALITY

FINAL COMPLETION CERTIFICATE

By the affixing of my signature I hereby certify that final inspection has been made and all work has been performed in accordance with the above contract # and is hereby accepted by the municipality as completed.

Authorized Agent for the Municipality

***DATE** _____

*** The contractor is responsible for maintenance of permanent pavement repairs for a period of one year from this date.**



CERTIFICATE OF COMPLIANCE

1. ♦COUNTY: _____ ♦LR/SR: _____ ♦SEC/SEG: _____ ♦ECMS#: _____
 (♦ - To be completed by the party that will ship the material to the project, otherwise leave blank.)

2. I / WE hereby certify that the material listed on line 5 was:

☐ Manufactured ☐ Fabricated ☐ Coated ☐ Precasted ☐ Produced

By _____
 (Name of Manufacturer, Fabricator, Coater, Precaster or Producer) (Supplier Code)

3. and the party listed above certifies that the material(s) on line 5 meets the requirements of

Publication 408, Section(s) _____

AASHTO, ASTM, Federal or other designation _____

4. The material listed below is being shipped to: _____
 (Company Name)

5. LOT NO. QUANTITY APPROVED MATERIAL AS LISTED IN BULLETIN # 14 or 15
 BULLETIN # 41 or 42 PRODUCERS, LIST HMA / PCC JMF.

6. ☐ CHECK HERE IF YOUR PRODUCT CONTAINS IRON OR STEEL I / WE certify that we received a copy of the Mill Certification Form(s) from the manufacturer(s) of any steel or iron materials contained in our product and all manufacturing processes including coatings application (e.g., epoxy, galvanizing, or painting) have occurred in the United States and we are maintaining copy(s), in our files in accordance with Section 106.03(b)3. Note: While coating materials themselves are not covered by Buy America, the application of these materials on steel or iron must occur in the United States.

7. VENDOR CLASSIFICATION (CHECK ONE BLOCK ONLY) -

☐ #1 Manufacturer, Fabricator, Coater, Precaster Listed in Bulletin # 15, or Producer Listed in Bulletin # 14, 41 or 42

I certify that the above statements are true and to the best of my knowledge, fairly and accurately describe the product(s) listed.

☐ #2 Distributor, Supplier or *Private Label Company Not Listed in Bulletin # 15. Also, complete line 9

I certify that the material being supplied is one and the same as provided to us by the manufacturer listed on this document and quantities listed above are accurate.

8. NAME (print) : _____ TITLE: _____

COMPANY NAME : _____

SIGNATURE : _____ DATE: _____

By Responsible Company Official (QC Staff only if you checked block #1 on line 7)

9. List company that sold you the material(s) documented above: _____
 (Complete if you checked Block # 2 on line # 7, otherwise leave blank.) (Company Name)

After completing the Certificate of Compliance form CS-4171, maintain the original at your company's location. A copy of the Certificate of Compliance form must accompany your material shipment to its next destination. Also, if you receive material shipments from other companies related to PennDOT projects, the accompanying Certificate of Compliance forms must be kept on file at your location. These files must be available for inspection and verification by a Department Representative for a period of not less than THREE years from the date of the last shipment.

*Private Label Companies must identify the true manufacturer (Line 2) and the approved material (Line 5) as listed in Bulletin # 15.

Emergency Watershed Protection (EWP)

Richard Cohen Site

Dover Township, York County, PA

EWP Tool #: 42-10-185023-025

Prepared by:

United States Department of Agriculture (USDA)

Natural Resources Conservation Service (NRCS)

June 18, 2019

<u>Page #</u>	<u>Description</u>
1	Cover Sheet
2	Location Map
3	Plan Map
4	R-6 Rock Rip Rap Detail
5	Typical Stacked Block Detail
6	R-6 Toe Protection Detail
7	Rip Rap Dimension Detail
8	Typical Stream Diversion Detail
9	Profile & Cross Sections
10	Items of Work
11	Bid Schedule
12	Erosion and Sediment Control Guidelines
13	Quality Assurance Plan (QAP)

Appendix:

A 1-32 Technical Specifications

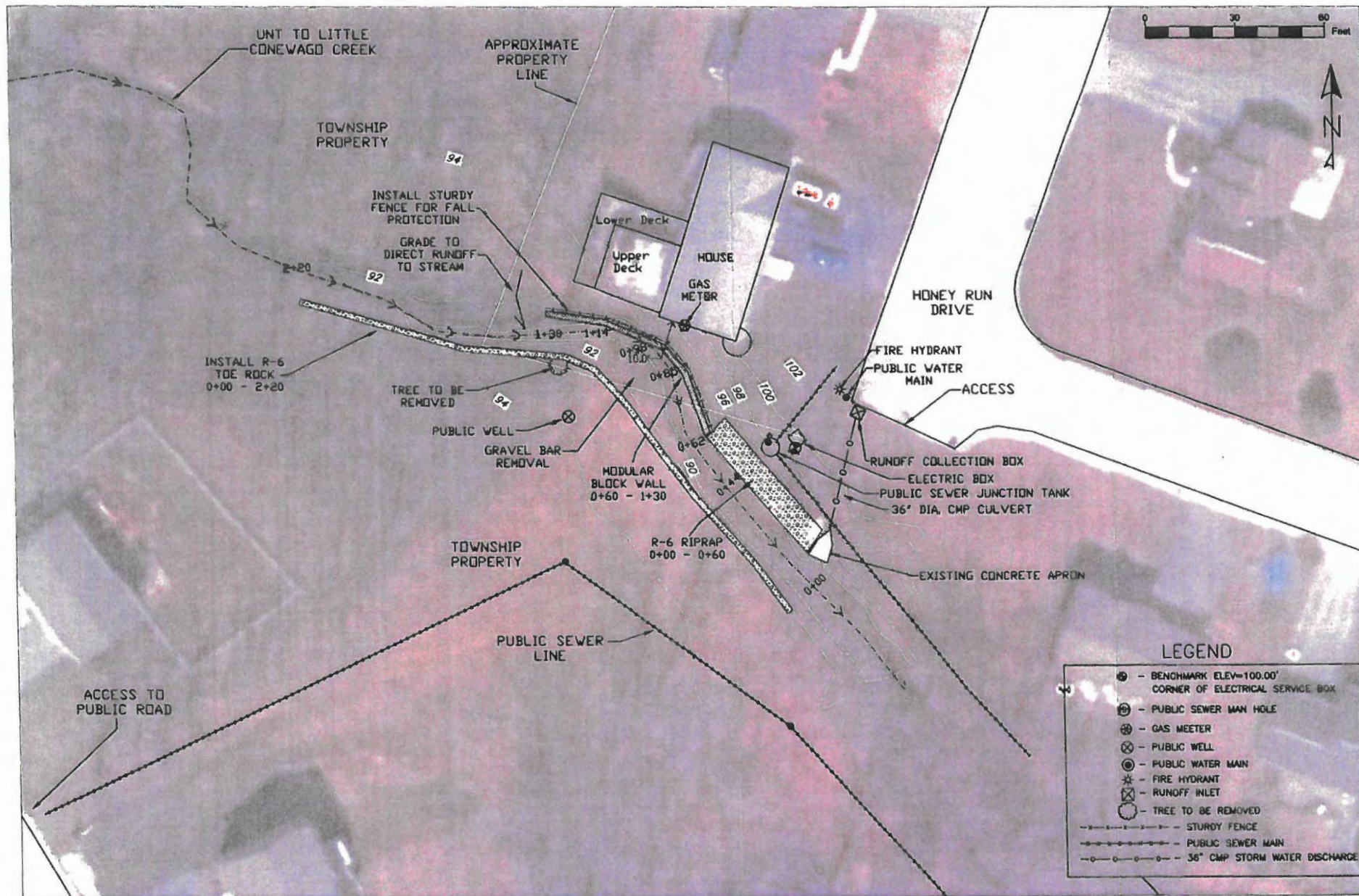
B 1-4 Calculations & Engineer's Estimate (REMOVE FOR BIDDING)

1 of 48



RICHARD COHEN YORK COUNTY, PENNSYLVANIA LOCATION MAP U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE	DESIGNED	GRV	DATE	6/2019	APPROVED BY	DATE
	DRAWN				FILE	
	REVISED				FILE	
	CHECKED	WAC	7/19		FILE	

2 OF 48



Scale 0 30 60 Feet

North Arrow

Sheet 3 of 4

Drawn by [Signature]

Checked by [Signature]

Approved by [Signature]

3048

RICHARD COHEN

YORK COUNTY, PENNSYLVANIA

RED PLAN VIEW

NRCS

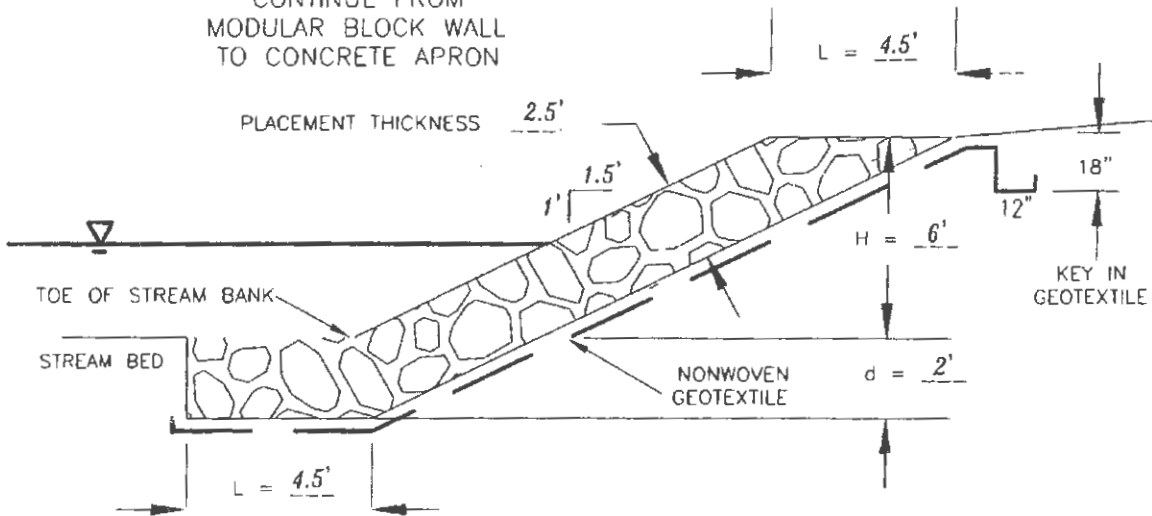
File No.

Drawing No.

Sheet 3 of 4

(NOT TO SCALE)

CONTINUE FROM
MODULAR BLOCK WALL
TO CONCRETE APRON

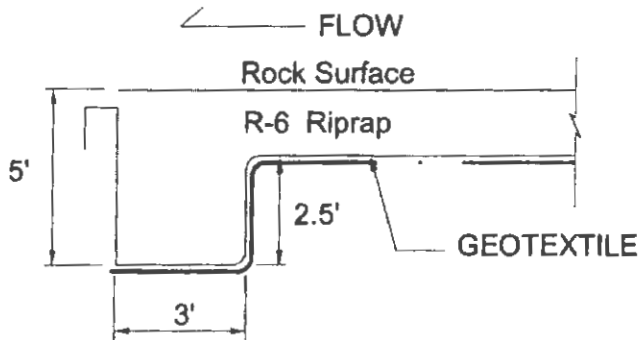


NOTES:

- EXCAVATE STREAM BED TO ALLOW THE INSTALLATION OF THE RIPRAP SO THAT THE TOE OF STREAM BANK MATCHES BOTH UP AND DOWN STREAM.
- EXCAVATE THE STREAM BANK TO THE PROPOSED SLOPE. REMOVE ALL ORGANIC MATTER PRIOR TO ROCK PLACEMENT.
- FILL MATERIAL SHALL BE WELL GRADED DEPOSITION FROM STREAM DEPOSITS, STREAM BANK CUTS OR AS DIRECTED BY THE PROJECT INSPECTOR.

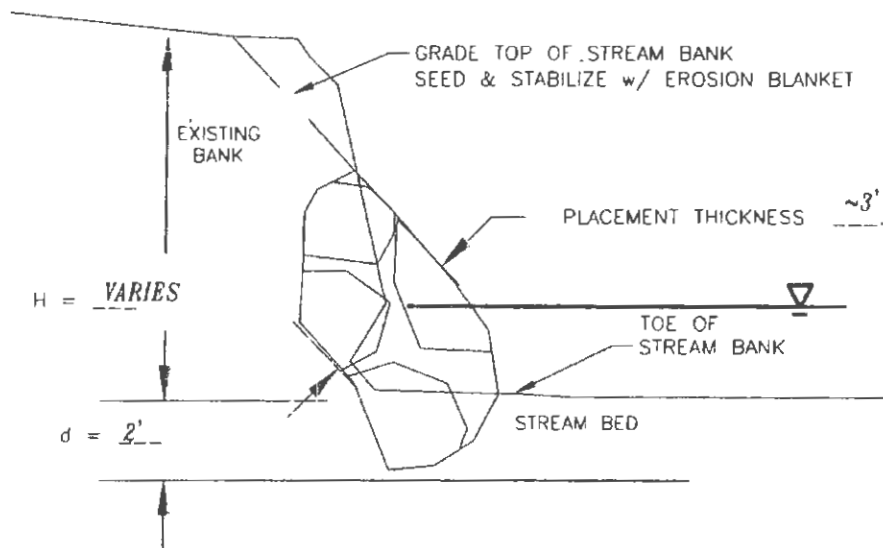
RIPRAP CUTOFF DETAILS

Right Bank \ Upstream



DATE 8/11 TIME 10:00 AM	RICHARD COHEN YORK COUNTY, PENNSYLVANIA RIPRAP DETAIL SHEET		DESIGNED <u>GRW</u>	DATE <u>6/20/19</u>	APPROVED BY _____	SHT _____
			DRAWN _____		TITLE _____	
			PLACED _____			
			CHECKED <u>WAC</u>	<u>7/17</u>	FILE _____	
U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE						

R-6 TOE PROTECTION (NOT TO SCALE)



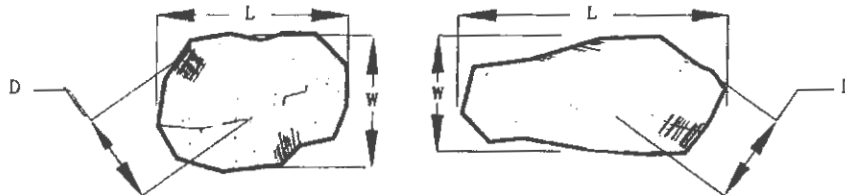
NOTES:

- EXCAVATE STREAM BED TO ALLOW THE INSTALLATION OF THE ROCKFILL SO THAT THE TOE OF STREAM BANK MATCHES BOTH UP AND DOWN STREAM.
- WITH A HEAVY EXCAVATOR, WORKING FROM THE TOP OF THE BANK, PUSH R-6 SIZE ROCK INTO THE TOE OF THE BANK AND KEY INTO STREAM BOTTOM.

RICHARD COHEN YORK COUNTY, PENNSYLVANIA TOE PROTECTION DETAIL SHEET U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE		DESIGNED: GRW CHECKED: WAC DATE: 6/20/19 7/19	APPROVED BY: _____ FILE: _____ DATE: _____ FILE: _____
--	--	--	---

RIPRAP DIMENSIONS

*Use "Blocky" Type Rock, $L/D = < 3$



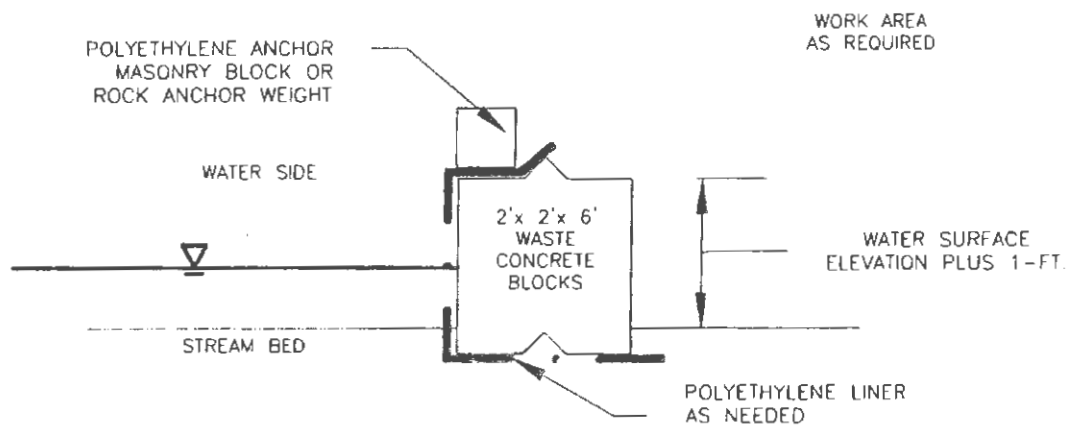
Gradation Name	Placement Thickness	Riprap Gradations				Bedding ^{4/}	
		Size - Inches ^{1/} (sq. opening ^{2/})				Gradation	Thickness
		D ₁₀₀	D ₈₅	D ₅₀ ^{3/}	D ₁₅	AASHTO	(inches)
R-3	12"	6	5	3	2	#57	3
R-4	18"	12	10	6	3	#57	4
R-5	24"	18	15	9	5	#57	5
R-6	30"	24	20	12	7	#1	6
R-7	36"	30	26	15	12	#1	6

- 1/ The subscript number is the maximum percent, by weight, which may be smaller than the respective size.
- 2/ The nominal size of a rock is that dimension (middle or composite average) which passes through a square opening with the same side dimension; i.e. it is not the longest dimension.
- 3/ At least 15%, by weight of the gradation, must be smaller than the D50 size.
- 4/ Non-Woven Geotextile may be used in place of bedding stone, where approved.

RICHARD COHEN YORK COUNTY, PENNSYLVANIA RIPRAP DIMENSION SHEET		DESIGNED: GRW DATE: 6/20/19 DRAWN: _____ CHECKED: WAC 7/19		APPROVED BY: _____ DATE: _____ WFL: _____	
U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE					

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TYPICAL STREAM DIVERSION (NOT TO SCALE)



NOTES:

-WASTE CONCRETE BLOCKS SHALL BE EMBEDDED INTO THE STREAM BED 4" TO 6" OR AS DIRECTED BY THE PROJECT INSPECTOR.

-A POLYETHYLENE LINER WILL BE REQUIRED IF WATER FLOW IS PRESENT IN THE DESIGNATED WORK AREA. POLYETHYLENE LINER SHALL BE SUPPORTED IN PLACE WITH A TOP WEIGHT SUCH AS MASONRY BLOCKS OR ON SITE ROCKS.

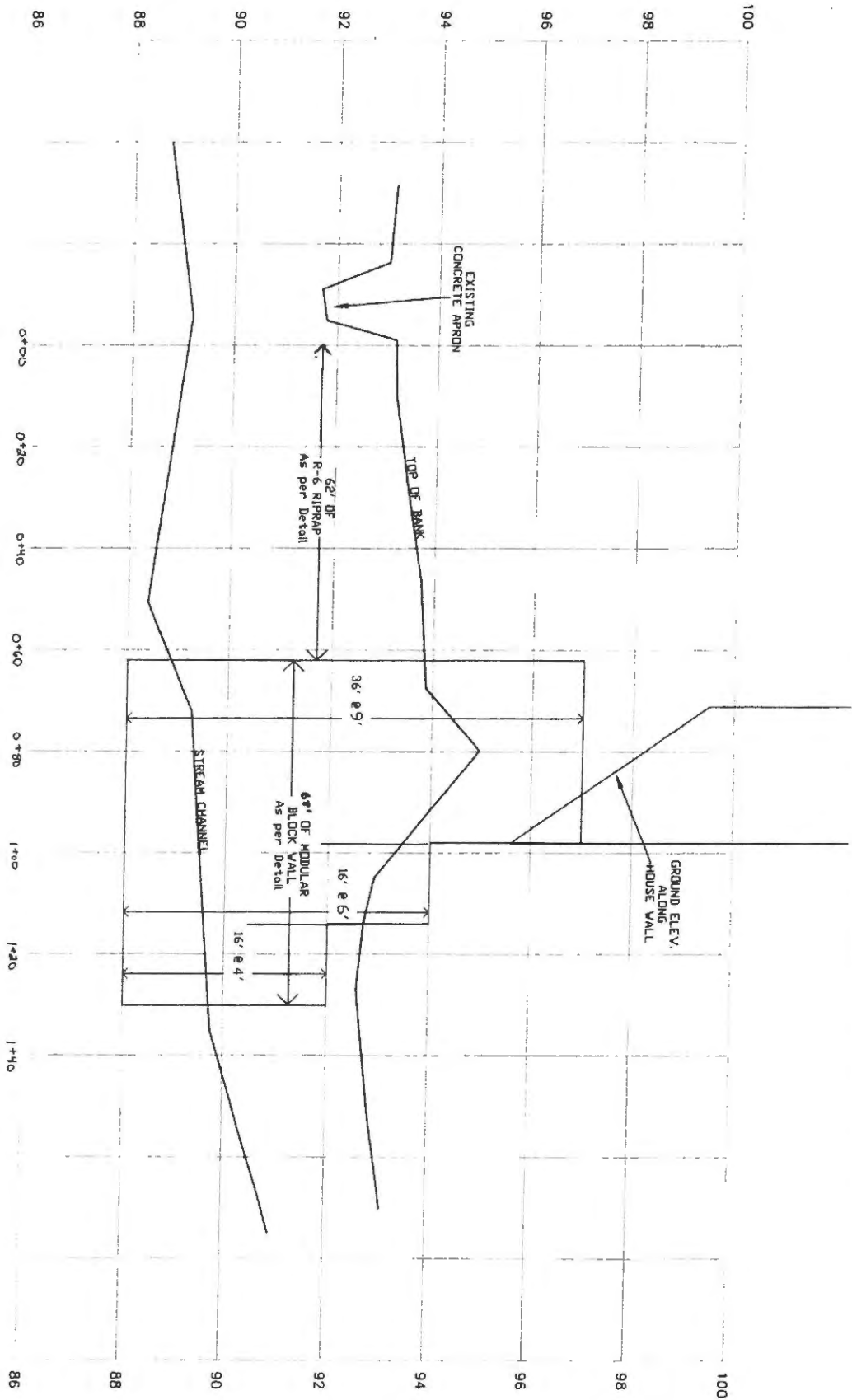
-PUMPING MAY BE REQUIRED TO DEWATER THE WORK AREA OF STANDING WATER, WHEN DIRECTED BY THE PROJECT INSPECTOR.

-MAXIMUM HEIGHT OF CONCRETE WASTE BLOCKS IS 4-FEET. TONGUE AND GROVES SHALL BE TOTALLY SEATED BETWEEN BLOCKS.

8x11 U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE	RICHARD COHEN YORK COUNTY, PENNSYLVANIA STREAM DIVERSION DETAIL SHEET		DESIGNED: GRV DRAWN: _____ CHECKED: WAC DATE: 6/2019	APPROVED BY: _____ TITLE: _____ DATE: _____
			DATE: 7/19	TITLE: _____

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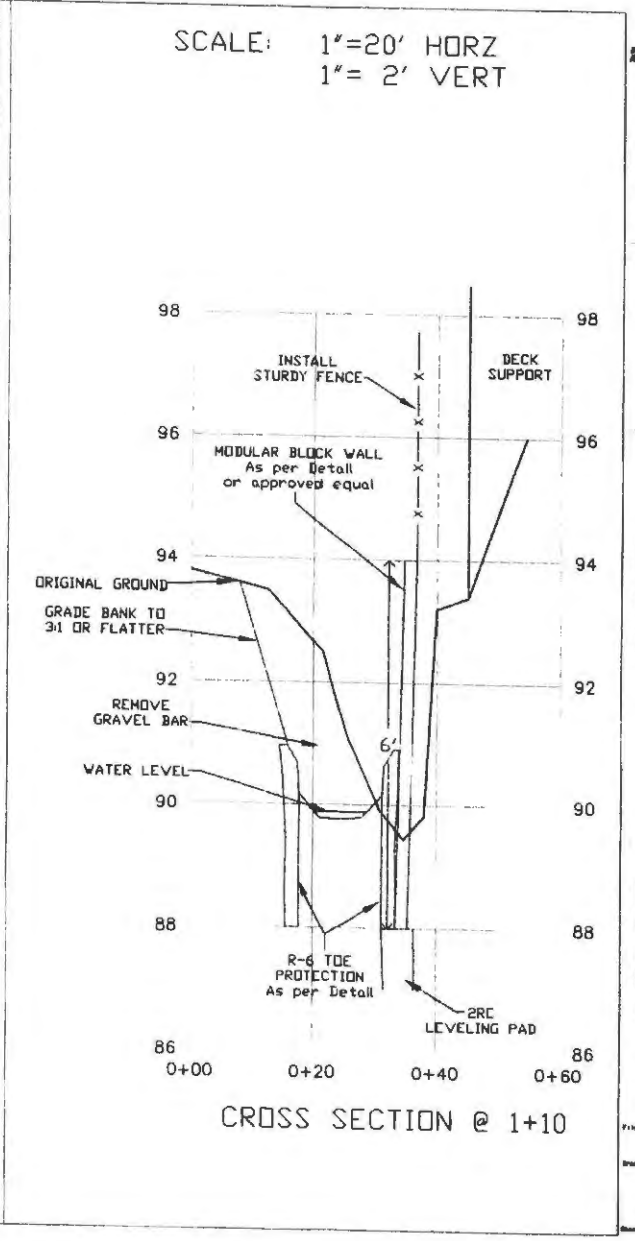
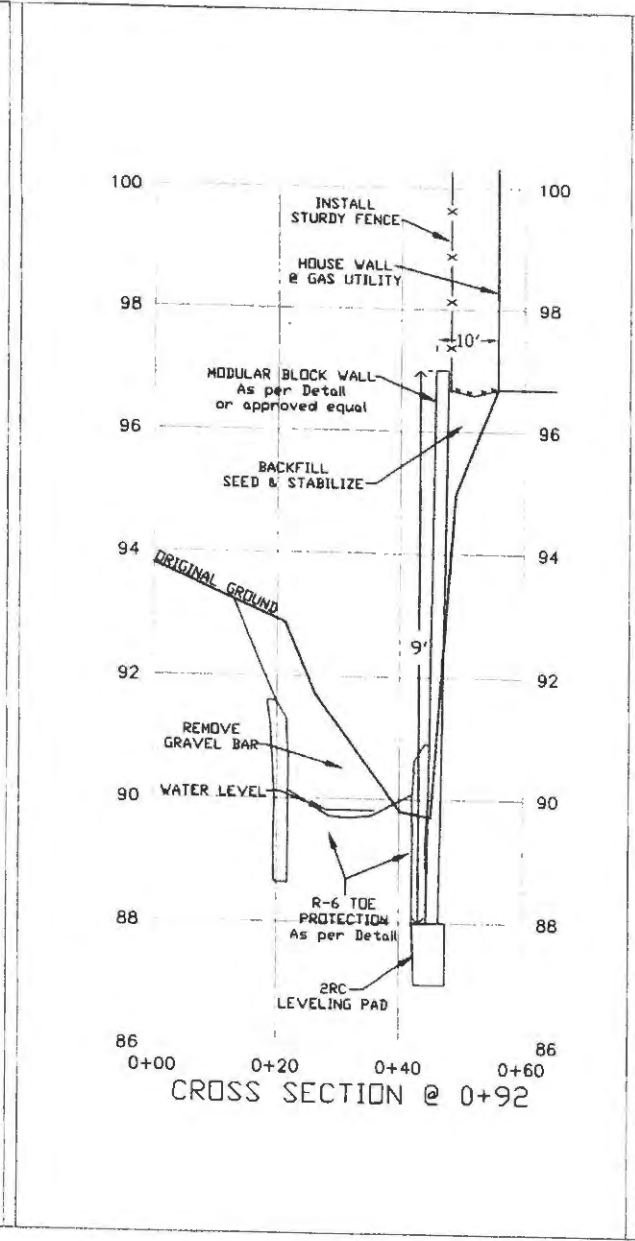
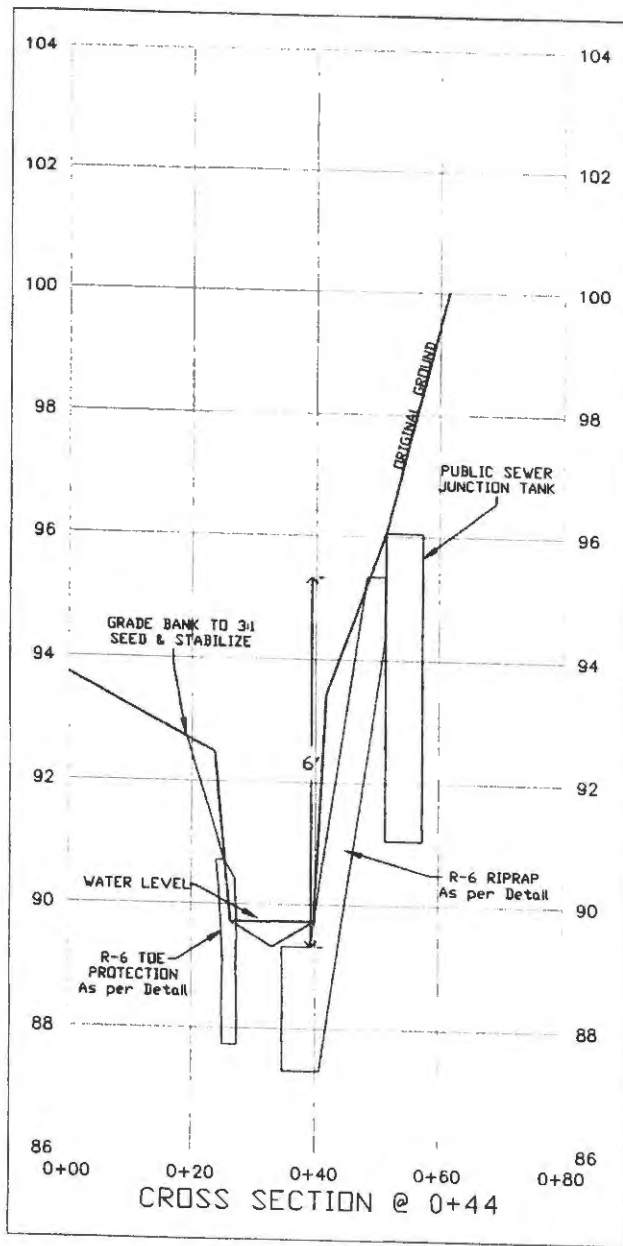
SCALE: 1"=20' HORZ
1"=2' VERT



RICHARD COHEN
YORK COUNTY, PENNSYLVANIA
FWP STREAM PROFILE

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DATE	6/20/2010
BY	WAC
CHECKED	
APPROVED	



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RICHARD COHEN
YORK COUNTY, PENNSYLVANIA

NRCS

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**ITEMS OF WORK RELATED TO
THE TECHNICAL SPECIFICATIONS AND DRAWINGS
FOR THE ~~DREW MARTIN~~ EWP SITE**

~~HELLAM~~ TOWNSHIP, YORK COUNTY PA

DOVER

*RICHARD
COHEN*

1. Data concerning the utilities at this site has been obtained from Pennsylvania One-Call System, Serial No. 20191563514. Accuracy of this data is not guaranteed. The Contractor must contact the PA One-Call System (1-800-242-1776) at least 3, but not more than 10, working days prior to the commencement of construction for utility information.
2. The primary scope of work for this project includes installing ~62' of R-6 riprap on the right streambank, as viewed looking upstream from the existing concrete discharge apron. Installing ~68' of modular block wall, as per detail, (36' @ 9' high, 16' @ 6' high and 16' @ 4' high) with R-6 toe protection. Grading and stabilizing the left streambank, ~220', with R-6 toe protection, as viewed looking upstream. The project will include removing gravel bar, select trees and debris from the stream channel. Provide clean fill to backfill behind the block wall to grade. A sturdy fence for accidental fall protection will be installed at the top of the modular block wall, as per landowner acceptance and NRCS approval. Debris and excess excavation within the Contractors work area shall be disposed of off site.
3. Access development shall be considered a component of Mobilization compensation and included in the payment for Mobilization/Demobilization. Steel plates or wood planks shall be used to protect existing macadam or concrete slabs from damage with track equipment. All mud, soil and debris shall be removed from equipment prior to exiting the work site. The Contractor is responsible for the protection of any private or public facilities in the work area for the duration of the contract. The Contractor will be responsible for repairing any damages during construction to a condition equal to or better than prior to construction. NRCS approval and acceptance is required for any repairs. No additional compensation will be made for damaged facility repair.
4. Implement the erosion control practices as described in the Erosion & Sedimentation Control Specification. Erosion and Sedimentation Control shall be included under the bid item "Mobilization/Demobilization". The stream will need to be diverted around the work site for the modular block wall construction and riprap installation.
5. Excess excavation shall be disposed of off site or at a location suitable to the landowner outside of the floodway. Excavation shall also be included in the "Precast Block" and the "Rip Rap" bid items. The stream channel will need to be shifted to the south after removing the gravel bar and debris is removed. A reasonably uniform channel width is expected throughout the length of project and should be approximately the same width as downstream of the project.

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6. Compacted backfill behind the block wall shall be a free draining material and installed as per the modular block manufacturer's specifications, including any required plastic geo grid. Silt and clay are not acceptable as backfill material. Compacted backfill shall be included in the "Precast Block" bid item. The geotextile and its installation shall be included in the "Precast Modular Block" and the "Rip Rap" bid items.
7. All disturbed areas shall be covered with 4"-6" of top soil, promptly seeded and mulched in accordance with the technical specification, Seeding. Steeper slopes shall be covered with erosion control blanket and stapled as per the manufacturer's recommendations.

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BID SCHEDULE**EWP SITE Dover Township, EWP Tool #: 42-10-18-5023-025**

Item No.	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization/Demobilization - Erosion and Sediment Control - Mobilization and Demobilization - Stream Diversion and Dewatering	1	Lump Sum	XXX	
2	Precast Modular Block - Compacted Backfill - Excavation Geotextile Drain Fill - Precast Modular Blocks	1	Lump Sum	XXX	
3	Toe Protection R-6 (Left Bank) R-6 (Right Bank)	1	Lump Sum	XXX	
4	Riprap Excavation Geotextile R-6 Riprap	1	Lump Sum	XXX	
5	Gravel Bar Removal Debris, Brush and Tree Removal -Excavation	1	Lump Sum	XXX	
6	Seeding & Stabilization - Seeding & ECB Installation - Sturdy Fall Protection Fence	1	Lump Sum	XXX	
				Total	
Performance Time		17 Working Days	24 Calendar Days		
Contractor's Name			Date		

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Erosion and Sediment Control Guidelines

The guidelines presented below, which address erosion and sediment control, will be included as a condition of all emergency permits. These guidelines must also be followed when work is conducted under an existing permit or when work is undertaken that does not require a permit.

1. Maps and plans show the location of the project with respect to municipalities, access roads, existing structures or other landmarks. The maps and plans show details of the specific work site(s) including limits of disturbance, stream width, depth, extent of debris and deposition removal, and placement details for bank stabilization materials.
2. Staging areas and construction entrances, including those used for equipment maintenance and servicing should be located away from flowing streams, and shall be stabilized with ASSHTO No. 1 rock.
3. All work should be done as quickly as possible, with bank stabilization to occur as segments of debris and deposition removal are completed.
4. Work should be performed from stream banks, as opposed to equipment operating in flowing streams, whenever possible.
5. Rock riprap used to stabilize stream banks or other areas shall be clean, dense, angular, blocky material. Minimum rock size shall be R-4, as rated by the National Stone Association.
6. All disturbed areas not stabilized with rock riprap, other materials, or seeded and mulched, shall be graded to avoid ponding water or concentrated flow. Standard seed mixtures and their specifications should be used. Hay and straw mulch shall be applied to such disturbed areas at a rate of approximately 3 tons to the acre (a loose layer 3/4 to 1 inch thick). Compost may be applied at a rate of 270-540 cubic yards per acre (2 to 4 inch thick uniform layer). Erosion control blankets should be installed/applied according to the manufacturer's specifications.
7. Only clean, non-polluting materials shall be used as fill. Exposed fill surfaces are to be stabilized.
8. Any sediment, trees, brush, or similar material excavated during debris removal shall be deposited in a suitable site away from the areas affected by flooding or wetlands, and stabilized with permanent vegetative cover. Other debris containing harmful or potentially hazardous materials should be disposed of in approved landfills.

These guidelines, and the maps and plans mentioned in item 1, along with any required contract specifications undertaken in cooperation with the Department of Environmental Protection (DEP) and the Natural Resources Conservation Service (NRCS), are considered to be the Erosion and Sedimentation Control Plan for Emergency Watershed Restoration projects.

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QUALITY ASSURANCE PLAN
For The Richard Cohen Site in
DOVER TOWNSHIP
YORK COUNTY, PENNSYLVANIA
EWP TOOL # 42-10-18-5023-025

A. Statement of project:

Description of work.: The damaged right bank (viewed looking upstream) of the stream will be repaired for approximately 130 feet in two reaches. Reach #1 will consist of ~62' of R-6 riprap. Reach #2 will consist of ~68' of modular block wall with R-6 toe protection. The left bank will have ~220' of R-6 toe rock installed along with gravel bar and debris removal.

B. Major items of work to be inspected and timing of inspections are:

ITEM NO.	WORK OR MATERIAL	WORK DAYS	INSPECTION	
			PART	FULL
1.	Mobilization and Demobilization	2	X	
2.	Develop Access	1	X	
3.	Excavation	4	X	
4.	Erosion & Sediment Control	1	X	
5.	Modular Block Placement	3	X	
6.	R-6 Riprap Placement	2	X	
7.	Toe Rock Placement	2	X	
8.	Seeding and Stabilization (Including Fence)	2	X	

C. Timing of inspections needed:

Use Performance time from Bid Schedule

1. 17 Work Days: x 1.4 = 24 calendar days
2. Start Date: _____
3. Completion Date: _____

D. Skills and training needed to perform the inspection:

1. Government Representative:

Skills

- a. Must supervise one or more inspectors.
- b. Must understand the design concept.
- c. Must be familiar with quality assurance tests and inspection.
- d. Must be able to maintain communication with the contractor and contracting officer.

Training

- a. Has training in Soil Classification. (Unified System)
- b. Has a minimum of two years construction experience.

2. Inspector:

Skills

- a. Perform basic staking and surveying.
- b. Inspect excavation and fill operations.
- c. Inspect rock and stone operations.
- d. Maintain required records.
- e. Measure and calculate quantities.

Training

- a. Has one year of construction experience related to conservation practices
- b. Has training in construction layout and staking.

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E. Inspection equipment and facilities:

1. Survey equipment
2. Photographic equipment

F. Prepared by or under the direction of and recommended by:

Gerald Whiteside Date: 6/20/2019
Project Designer

G. Engineering technical approval and job classification concurrences:

Area Engineer Date: _____

H. Names of personnel who have the skills for this project:

1. Government Representative:
2. Inspector:

I. Statement of Availability:

Government Representative: _____ is available to serve as the
Government Representative during the period _____ to _____ on the noted EWP Site.

Inspector: _____ is available to serve as inspector during the period
_____ to _____ on the noted EWP Site.

1. Others:

CONCUR: _____ Date: _____
Assistant State Conservationist for Field Operations

CONCUR: _____ Date: _____
Immediate Supervisor (If other than ASTC.)

J. Quality Assurance Plan Concurred and Approved:

CONCUR: _____ Date: _____
Area Engineer

CONCUR: _____ Date: _____
Contracting Officer

TECHNICAL SPECIFICATIONS FOR EWP WORK
RICHARD COHEN EWP SITE
YORK COUNTY, PENNSYLVANIA
EWP TOOL #: 42-10-18-5023-025

Those specifications checked below shall be adhered to when required by any applicable bid item for this EWP Site:

- ☒ Aggregate - #2RC
- ☒ Aggregate - #57
- ☐ Biotextile Matting
- ☒ Chainlink Fence
- ☐ Class A Concrete
- ☒ Clearing and Grubbing
- ☒ Compacted Backfill
- ☒ Debris Removal
- ☒ Erosion and Sediment Control (see pg. 12)
- ☒ Excavation
- ☒ Geotextile
- ☒ Gravel Drain
- ☒ Mobilization and Demobilization
- ☒ Precast Concrete Modular Block Wall
- ☐ Grouted R-6 Riprap
- ☒ R-6 Riprap
- ☒ R-6 Rockfill
- ☐ Grouted R-7 Riprap
- ☐ R-7 Riprap
- ☐ R-7 Rockfill
- ☐ Grouted R-8 Riprap
- ☐ R-8 Riprap
- ☐ R-8 Rockfill
- ☐ Removal of Concrete and Masonry Structures
- ☒ Rock Construction Entrance
- ☐ Rock Apron
- ☐ Rootwads
- ☒ Seeding
- ☐ Stacked Rock
- ☐ Steel Reinforcement
- ☒ Stream Diversion and Dewatering
- ☒ Topsoiling
- ☒ Unclassified Fill

NOTE: Adhere to the design assumptions provided.

- Refer to other specifications as needed.

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TECHNICAL SPECIFICATIONS

AGGREGATE - #2RC

SCOPE

This work is replacing unsuitable foundation materials and backfilling around the culvert with 2RC aggregate to the lines and grades shown on the Drawings.

APPLICABLE PUBLICATIONS

Pub. 408 - Specifications, Pennsylvania Department of Transportation.

Bulletin 14 - Aggregate Producers, Pennsylvania Department of Transportation.

MATERIAL

Material shall be 2RC aggregate, as specified in Section 703.3 of Pub. 408.

Obtain aggregate from a source listed in Bulletin 14.

PROCEDURE

Place aggregate in the dry, and not on frozen ground. Conduct aggregate placement operations in such a way that the permanent structures are not damaged.

Place aggregate as soon as practicable, after foundation area is excavated or culvert is installed. Within the limits shown on the Drawings, place aggregate in loose four (4) inch layers and compact each layer with mechanical tampers or other approved equipment. If using a vibratory compactor, the thickness of the loose layers may be increased to eight (8) inches. Do not use roller or heavy construction equipment for compaction until reaching final grade. Do not drop aggregate materials, but scatter and bring up equally on opposite sides of the culvert.

Compaction of all aggregate shall be considered satisfactory on the basis of nonmovement of the materials under compaction equipment.

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TECHNICAL SPECIFICATIONS

AGGREGATE - #57

SCOPE

This work is replacing unsuitable foundation materials, backfilling precast concrete walls, and backfilling around pipes and structures with #57 coarse aggregate to the lines and grades shown on the Drawings.

APPLICABLE PUBLICATIONS

Pub. 408 - Specifications, Pennsylvania Department of Transportation.

Bulletin 14 - Aggregate Producers, Pennsylvania Department of Transportation.

Bulletin 15 - Approved Construction Materials, Pennsylvania Department of Transportation

MATERIALS

- A Coarse Aggregate** - Coarse aggregate shall be AASHTO #57 coarse aggregate, as specified in Section 703.2 of Publication 408. Obtain coarse aggregate from a source listed in Bulletin 14.
- B Geotextile** - Geotextiles shall meet the requirements of Section 735 of Publication 408 for Class 1 geotextiles. Use a geotextile listed in Bulletin 15.

PROCEDURE

Place aggregate in the dry, and not on frozen ground. Conduct backfill operations in such a way that the permanent structures are not damaged.

Place aggregate in loose layers not exceeding six (6) inches in depth, and compact each layer with mechanical tampers or other approved means. If working clearances permit, place backfill in loose layers not exceeding eight (8) inches in depth and compact each layer with rollers, tracked vehicles or other approved equipment.

Behind the precast concrete wall, place aggregate after each succeeding course of the wall is installed. Compaction of the backfill shall be considered satisfactory on the basis of nonmovement of the materials under compaction equipment. Care shall be exercised in the vicinity of existing pipes and their new connections through the wall so that the pipes are not damaged during aggregate placement operations.

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TECHNICAL SPECIFICATIONS

CHAIN LINK FENCE

SCOPE

This work is furnishing and installing chain link fence of height shown on the Drawings.

APPLICABLE PUBLICATIONS

AASHTO M 232 - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.

AASHTO M 280 - Standard Specification for Zinc-Coated (Galvanized) Steel Barbed Wire.

ANSI B 18.22.1 - Standard Specification for Plain Washers.

ASTM A 6 - Standard Specification for General Requirements for Rolled Steel Plates, Shapes, Sheet Piling and Bars for Structural Use.

ASTM A 36 - Standard Specification for Structural Steel.

ASTM A 53 - Standard Specification for Pipe Steel, Black and Hot-Dipped, Zinc Coated Welded Seamless.

ASTM A 276 - Standard Specification Stainless Steel Bars and Shapes.

ASTM A 582 - Standard Specification Free-Machining Stainless Steel Bars.

ASTM C 387 - Standard Specification for Packaged, Dry, Combined Materials for Mortar and Concrete.

ASTM F 593 - Standard Specification for Stainless Steel Bolts, Hex Cap Screws and Studs.

ASTM F 594 - Standard Specification Stainless Steel Nuts.

ASTM F 626 - Standard Specification for Fence Fittings.

ASTM F 668 - Standard Specification for Poly (Vinyl Chloride) (PVC)-Coated Steel Chain Link Fence Fabric

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- ASTM F 1043 - Standard Specification for Strength and Protective Coatings on Metal Industrial Chain Link Fence Framework.
- ASTM F 1083 - Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures.

MATERIALS

A. Fence - Fabric, posts, gates, and necessary hardware shall meet the following requirements:

1. **Fabric** - Fabric shall be Class 2b, PVC-coated wire consisting of a PVC coating fused and adhered to a zinc-coated, aluminum-coated, or zinc-5% aluminum-mischmetal alloy-coated steel wire, conforming to the requirements of ASTM F 668 with the following additions and/or modifications. Fabric shall be not less than No. 9 gage wire with 2-inch mesh sizes. The vinyl coating shall be of color approved by the Inspector. The selvage shall be knuckle-knuckle (top-bottom). All wire ends shall be coated.
2. **Posts** - Use posts of galvanized steel and that will be referred to as "terminal" or "line". Terminal posts include corner, angle, pull, and end posts. Line posts are also known as "intermediate" posts. Pipes for posts shall conform with the requirements of ASTM F 1083, Schedule S-40, or the requirements of SS-40 of Allied Tube and Conduit Fence Division, 16100 South Lathrop Ave., Harvey, IL 60426, except that the weight of zinc coating shall not be less than 2 ounces per square foot.

For fence heights of less than 5 feet, the nominal sizes of terminal and line posts shall not be less than 2 inches and 1-1/2 inches, respectively. For fence heights of 5 feet or more, the nominal sizes of terminal and line posts shall not be less than 2-1/2 inches and 2 inches, respectively.

3. **Anchorage** - Either type specified below may be used. The Inspector must approve the anchorage system and installation method. Submit manufacturer's product specifications and installation recommendations for Inspector approval prior to installation.
 - a. **Wedged Anchorage** - Anchorage shall be stainless steel. Bolts shall conform to ASTM A 276, Type 304, or ASTM A 582, Type 303. Bolts shall be 3/8-inch diameter and factory fitted with wedged shields that expand to securely anchor the bolts in place when the anchoring nut is fully tightened to the manufacturer's specification.
 - b. **Adhesive Anchorage** - Anchorage shall be stainless steel adhesive anchor system. Bolts shall conform to ASTM F 593. Nuts shall conform to ASTM F 594. Washers shall conform to ANSI B18.22.1, Type A Plain. Bolts shall be 3/8-inch diameter and each anchor shall develop minimum tensile bond strength of 4,000 lbs. per anchor.

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4. **Top Rail** - Top rail shall not be less than 1-1/4 inch nominal size galvanized steel pipe conforming with the requirements of ASTM F 1083, Schedule S-40, or the requirements of SS-40 of Allied Tube and Conduit Fence Division, 16100 South Lathrop Ave., Harvey, IL 60426, except that the weight of zinc coating shall not be less than 2 ounces per square foot.
5. **Bottom Wire** - Bottom wire shall be galvanized and vinyl-coated coil spring tension wire. The galvanized core wire shall not be less than 7 gage in size, and it shall be vinyl coated conforming to the same requirements as those of the fabric mentioned above.
6. **Braces** - When required, braces shall not be less than 1-1/4 inch nominal size galvanized steel pipe conforming with the requirements of ASTM F 626, Schedule S-40, or the requirements of SS-40 of Allied Tube and Conduit Fence Division, 16100 South Lathrop Ave., Harvey, IL 60426, except that the weight of zinc coating shall not be less than 2 ounces per square foot.
7. **Truss Rods** - When required, truss rods shall not be less than 3/8-inch diameter steel rods conforming with the requirements of ASTM F 626, except that the weight of the zinc coating shall not be less than 2 ounces per square foot. Truss rods shall be provided with suitable turnbuckles.
8. **Gates** - When required, gates shall be of types and widths shown on the Drawings. Frames shall be of round pipes of not less than 2 inches in diameter conforming with the requirements of ASTM F 1083, Schedule S-40, or the requirements of SS-40 of Allied Tube and Conduit Fence Division, 16100 South Lathrop Ave., Harvey, IL 60426, except that the thickness of zinc coating shall be as specified for the posts mentioned above. All joints shall be securely welded, and the gates shall be galvanized after fabrication. The fabric for the gates shall be the same as the fence.
9. **Fittings** - All fittings shall conform with the requirements of ASTM F 626. Terminal post caps shall be fitted with recessed allen wrench head set screws for anchoring the cap to the post.
10. **Hardware** - All hardware (bolts, nuts, washers, etc.) shall be of commercial quality or better, and shall be galvanized in accordance with the requirements of AASHTO M 232.
11. **Locks and Keys** - Provide a waterproof lock for each gate and a set of 3 brass keys for each lock. Key all locks on the project alike.

B. Anchoring Grout - Use either hydraulic cementitious grout or epoxy resin mortar.

PROCEDURE

For installing fence on concrete or masonry structures, furnish and install anchor plates as shown on the drawings titled, "Anchor Plate Details", or as recommended by the precast modular wall

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manufacturer. Drill holes with a rotary bit with no damage to the surrounding materials. Percussion drilling will not be permitted. Drilling of core holes to place posts will not be permitted.

Install posts plumb, in proper horizontal alignment with the top of the posts in proper vertical alignment, and in equal spacing not exceeding 10 feet. Install corner posts at changes in direction where the deflection angle so requires in the opinion of the manufacturer, as approved by the Inspector.

Install pull posts at changes in grade of 10 percent or more. Also, install pull posts at intervals not exceeding 500 feet and at closer equal spacing on curves, as recommended by the manufacturer, so that the strain of the fence shall not bend the line posts. Space pull posts evenly between corner, gate and/or end posts.

Insert top rails through the base of the line post caps, with expansion couplings joining the rails to form a continuous brace for each stretch of fence between terminal posts. Outside sleeve type expansion couplings shall be at least 6 inches long and shall be installed at spacings recommended by the manufacturer. Securely fasten the top rails to the terminal and gate posts by rail ends and brace bands. Install bottom wire as shown on the Drawings.

For fences 4 feet in height, braces will be required only when recommended by the manufacturer. Follow manufacturer's instructions for installing braces.

Securely fasten the fabric to all posts, top rail, and bottom wire at intervals of not more than 14 inches. Fasten fabric to the outside or most commonly seen side of the posts. Place fabric parallel to the base surface. The nominal distance between the base surface and the fabric shall be 2 inches and shall not exceed 3 inches. In case of irregular ground surfaces, grade the area at no additional cost.

If necessary, install gates in accordance with the recommendations of the manufacturer and as directed by the Inspector, at locations shown on the Drawings.

Close gaps between terminal posts and adjoining features with extensions of fencing, as approved by the Inspector.

At no additional cost, repair or replace any damaged component of the fence for the duration of the Contract.

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TECHNICAL SPECIFICATIONS

CLEARING AND GRUBBING

SCOPE

This work is removal and disposal of all natural growth and objectionable materials within the Contractor's Working Area, as necessary for construction, access, and stockpiling of materials.

PROCEDURE

- A. **General** – Before commencing the work, mark the limits for clearing and grubbing at the site and obtain approval from the Inspector. Do not damage existing vegetation and objects designated to remain.
- B. **Clearing** – Remove aboveground portions of all objectionable materials, natural growth, timber and logs. Stumps may remain, but shall not extend more than twelve (12) inches above the lowest adjacent original ground.
- C. **Grubbing** – Remove belowground portions of all objectionable materials, natural growth, timber and logs in riprap foundation areas. Remove roots having a diameter of one and one-half (1-1/2) inches or more to at least three (3) feet below the original ground surface.
- D. **Disposal** – Merchantable timber and logs shall become the property of the Contractor. Dispose of all other cleared and grubbed materials in accordance with local ordinances and regulations.

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TECHNICAL SPECIFICATIONS

COMPACTED BACKFILL

SCOPE

This work is backfilling around structures, replacing unsuitable foundation materials, and replacing materials excavated beyond established payment lines, with suitable materials to the lines and grades shown on the Drawings, or as directed by the Inspector.

MATERIALS

Secure backfill materials from required excavation or from borrow areas. Materials shall be free from roots, brush, frozen and other objectionable materials, and stones having any dimension greater than three (3) inches. Use granular and pervious material that is well graded from coarse to fine. The Inspector will decide the material's suitability for use in backfilling.

PROCEDURE

Conduct backfill operations so that the permanent structures are not damaged. At your own expense, and to the satisfaction of the Inspector, repair or replace any structure damaged by your operations.

Place backfill in the dry and not on frozen ground. Place material in layers not exceeding four (4) inches in depth and compact each layer with vibratory compactors. Where working clearances permit, backfill may be placed in layers not exceeding eight (8) inches in depth, and compacted with a roller. Do not drop backfill materials, but scatter and bring up evenly. Add water or dry the backfill materials as necessary to attain as close to the optimum moisture content as possible during compaction. No free water shall drain off and adversely affect the underlying or adjacent materials. Density will be determined on the basis of nonmovement of the material under the compaction equipment. If the density and/or moisture content of the backfill is not satisfactory, replace and/or recompact the materials to the satisfaction of the Inspector.

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TECHNICAL SPECIFICATIONS

DEBRIS REMOVAL

SCOPE

This work is the removal and disposal of floatable materials which have been transported by high water flows and deposited in the channel, at bridges and culverts, or in the stream overbanks, with limits as shown on the Drawings and/or as directed by the inspector.

PROCEDURE

- A. Removal of objectionable material shall be accomplished by standard practices of the industry for this type of work. Equipment shall operate in the dry as much as practical. Care shall be taken not to endanger near-by structures, or improved property. At no additional cost to the Department, repair or remedy property or structures damaged as a result of your operations.
- B. Storage, collection, transportation, processing and final disposal of solid waste shall be in accordance with local codes and ordinances.
- C. Open pit burning is an acceptable means of processing removed materials and final site clean-up materials. At no time shall a fire be left unattended, and the Contractor will be held responsible for any damage resulting from such fires.
- D. Burn site or spoil area shall be covered and final graded to conform with adjacent contours.

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TECHNICAL SPECIFICATIONS

EXCAVATION

SCOPE

This work is the removal, hauling, and disposal of all materials encountered, as shown on the Drawings.

PROCEDURE

- A. General** – Follow all guidelines set forth in the Construction Industry Standards, OSHA 2207, of the Occupational Safety and Health Administration, U.S. Department of Labor.

Maintain stable slopes. In case of a slide as a result of negligence or carelessness on the Contractor's part, it shall remove and replace material in the slide at no extra cost.

Protect the work, adjacent buildings, and property.

During excavation, keep the top surface graded for drainage. Replace overexcavated work with materials designated by the Inspector.

- B. Excavation** – Remove all materials to the limits shown on the Drawings. During excavation of a channel, keep erosion and interference with the flow of the stream to a minimum.

- C. Disposal** – Incorporate suitable materials from required excavation into the work, providing they meet the requirements of the appropriate sections of these Technical Specifications. If necessary, stockpile suitable materials for later use. Dispose of unsuitable, or excess, materials in spoil area. The Contractor is responsible for securing spoil areas.

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TECHNICAL SPECIFICATIONS

GEOTEXTILE

SCOPE

This work is furnishing and placing geotextile and necessary fasteners.

MATERIALS

- A. Geotextile** – This material shall conform to the requirements of Class 4 in Section 735 of PennDOT Publication 408. Obtain geotextiles from a manufacturer listed in PennDOT Bulletin 15.

During the periods of shipment and storage, protect geotextiles from direct sunlight, ultraviolet rays, temperatures greater than 140°F, mud, dirt, dust, and debris. To the extent possible, maintain geotextiles wrapped in a heavy-duty covering or shield from direct sunlight.

Geotextiles will be rejected at the time of installation if any defects, deterioration, or damage has occurred during manufacture, transportation, or storage.

- B. Fasteners** - Provide steel securing pins, 18-inches long x 3/16-inches in diameter, pointed at one end; and with a 1½-inch washer head at the other end. Alternate securing devices, approved by the Inspector, may be used.

SUBMITTALS

The Contractor shall submit the following samples and product certifications to the Inspector for approval at least ten (10) days prior to installation:

1. Geotextile and fastener sample
2. Product specifications and certification from manufacturer
3. Manufacturer's recommended installation procedure for this type of site.

PROCEDURE

Install the geotextile at the locations shown on the drawings. Conduct operations in a manner as to prevent damages.

MAINTENANCE

Maintain the geotextile and all appurtenances, repairing all damaged areas for the duration of the contract.

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TECHNICAL SPECIFICATIONS

GRAVEL DRAIN

SCOPE

This work is construction of gravel drains by enclosing coarse aggregate with geotextile.

APPLICABLE PUBLICATIONS

Pub. 408 - Specifications, Pennsylvania Department of Transportation.

Bulletin 14 - Aggregate Producers, Pennsylvania Department of Transportation.

Bulletin 15 - Approved Construction Materials, Pennsylvania Department of Transportation.

MATERIALS

A. Coarse Aggregate – Use AASHTO #57 coarse aggregate, as specified in Section 703 of Pub. 408. Obtain aggregate from a source listed in Bulletin 14.

B. Geotextile - Provide Class 4, Type A Geotextile, conforming to the requirements of Section 735 of Pub. 408. Obtain geotextiles from a manufacturer listed in Bulletin 15.

During the periods of shipment and storage, protect geotextiles from direct sunlight, ultraviolet rays, temperatures greater than 140°F, mud, dirt, dust, and debris. To the extent possible, maintain geotextiles wrapped in a heavy-duty covering or shield from direct sunlight.

Geotextiles will be rejected at the time of installation if any defects, deterioration, or damage has occurred during manufacture, transportation, or storage.

PROCEDURE

Install geotextile longitudinally, without stretching, in the prepared excavated areas along the sides of the structure as shown on the Drawings. Place geotextile in the dry and not on frozen ground. Then place coarse aggregate in 4-inch layers, in the dry, and do not drop in a mass. Thoroughly compact each layer with mechanical tampers or by other acceptable methods. Do not use vibratory rollers. After completion of compaction of the coarse aggregate, lay the geotextile over the top of the coarse aggregate by overlapping 1 foot as shown on the Drawings. Also, overlap the geotextile by at least 1 foot at the ends of rolls and at the ends of gravel drains. At no additional cost, remove and replace any geotextile damaged during construction.

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TECHNICAL SPECIFICATIONS

MOBILIZATION AND DEMOBILIZATION

SCOPE

The work consists of the mobilization and demobilization of the contractor's forces and equipment necessary for performing the work required under the contract. Mobilization will not be considered as work in fulfilling the contract requirements for commencement of work.

PROCEDURE

Mobilization shall include all activities and associated costs for transportation of contractor's personnel, equipment, and operating supplies to the site; establishment of offices, buildings, and other necessary general facilities for the contractor's operations at the site; permits, premiums paid for performance and payment bonds including coinsurance and reinsurance agreements as applicable; and other items specified in Items of Work.

Demobilization shall include all activities and costs for transportation of personnel, equipment, and supplies not required or included in the contract from the site; including the disassembly, removal, and site cleanup of offices, buildings, and other facilities assembled on the site specifically for this contract.

This work includes mobilization and demobilization required by the contract at the time of award. If additional mobilization and demobilization activities and costs are required during the performance of the contract as a result of changed, deleted, or added items of work for which the contractor is entitled to an adjustment in contract price, compensation for such costs will be included in the price adjustment for the item or items of work changed or added.

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TECHNICAL SPECIFICATIONS

PRECAST CONCRETE MODULAR BLOCK WALL

SCOPE

This work is furnishing and installing precast concrete modular block walls with riprap toe protection.

APPLICABLE PUBLICATIONS

- Pub. 408 - Specifications, Pennsylvania Department of Transportation.
- Bulletin 14 - Aggregate Producers, Pennsylvania Department of Transportation.
- Bulletin 42 - Producers of Ready Mix Concrete.

MATERIALS

- A. General** - Supply materials from sources approved by the Inspector.
- B. Precast Concrete Modular Blocks** - Use interlocking precast concrete blocks having a minimum weight of 1,600 pounds per block, a minimum 28-day compressive strength of 3,000 pounds per square inch, and a maximum absorption rate of 6% or less, when tested according to ASTM C 140. Blocks shall have varying lengths, so the vertical joints between blocks are staggered and not continuous from row to row. Acceptable precast concrete modular block systems include:
 - Dura-Hold manufactured by Unilock, 51 International Blvd., Brewster, New York, 10509, Phone 845-278-6700, and
 - Redi-Rock manufactured by Redi-Rock International, 05841 US 31 South, Charlevoix, Michigan, 49720, Phone 866-222-8400.
- C. Leveling Pad**
 - 1. On Soil: Use select granular material (2RC) conforming to the requirements of Section 703.3 of Pub. 408. Obtain aggregate from a source listed in Bulletin 14.

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2. On Bedrock: Use Class A Concrete conforming to the requirements of Section 704 of Pub. 408. Obtain concrete from a source listed in Bulletin 42, Producers of Ready Mix Concrete.

D. Gravel Drain - Conform to the requirements of the Technical Specification titled "Gravel Drain".

E. Geotextile - Conform to the requirements of the Technical Specification titled "Gravel Drain".

F. Riprap Toe Protection - Conform to the requirements of the Technical Specification titled "Riprap Toe Protection".

ENGINEERING DESIGN AND SUBMITTALS

Engineering Design - A professional engineer shall provide:

1. Detailed design calculations that show the wall will be stable.
2. Stamped construction drawings.
3. The installation procedure for the wall.

The design should include analysis of internal, external, and global stabilities. Design criteria include the following:

- A surcharge behind the top of wall of 250 pounds per square foot.
- Wall length, wall height, and slope of the backfill behind the wall are labeled on the site plan.
- Design of a reinforcement system or tie-backs will be required to provide stability, based on the height of the wall. Select a reinforcement system recommended by the manufacturer.
- The bottom of the wall shall be set a minimum of 18 inches below the invert of the stream.

HANDLING AND STORAGE

Handle and store blocks in such manner that no damage will occur to the concrete.

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QUALITY CONTROL AND REPAIRS

Blocks will be rejected for any of the following reasons:

1. Defects that indicate imperfect mixing, placing, or curing of concrete.
2. Fractures and cracks, including spalls or broken edges. Dime-size bug holes on the block face may be patched and/or shake-on color stain can be used to blend into the remainder of the block face.
3. Maximum dimensional deviations shall be 0.50 inch or 2%, whichever is less. Maximum width (face to back) deviation, including the architectural surface, shall be 1.0 inch.

Blocks may be repaired, if necessary, because of occasional imperfections in manufacture or handling damage and will be acceptable if, in the opinion of the Inspector, the repairs are sound, properly finished and cured, and the repaired sections conform to the requirements of the specifications.

PROCEDURE

A representative from the selected precast concrete modular block wall manufacturer or from the design engineer must be onsite to supervise installation of the wall. Construct the wall per the manufacturer's recommendations and as follows:

A. Foundation Preparation

1. If bedrock is over two and a half feet (2-1/2 feet) below the invert of the stream (so that the depth of soil exceeds 2-1/2 feet) construct foundation as follows. Excavate to the lines and grades shown on the construction drawings. Native foundation soil shall be compacted to 95% of standard proctor or 90% of modified proctor prior to placement of the 2RC stone leveling pad material. Soil not meeting the required strength shall be removed and replaced with acceptable, compacted material.

A leveling pad of select granular material, 2RC, stone shall be constructed with a 12-inch minimum thickness, and have a compacted final surface a minimum of 18 inches below the stream invert. The leveling pad shall be compacted to 95% of standard proctor or 90% of modified proctor to ensure a level, hard surface on which to place the first course blocks.

2. If bedrock is within two and a half feet (2-1/2 feet) of the invert of the stream, construct foundation as follows. Excavate to the bedrock. Construct a leveling pad out of Class A concrete directly on the bedrock. The thickness of the concrete shall be sufficient to provide a level surface on which to set the first row of blocks. Extend the concrete one-foot past the stream side face of the blocks.

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B. Geotextile - Place geotextile under the leveling pad and up the face of the excavated earth as shown in the details.

C. Precast Concrete Modular Block Wall Construction

1. **Set the First Row.** After obtaining the Inspector's approval of the foundation, install the first course of blocks on the leveling pad per the manufacturer's instructions. Check the blocks closely for levelness and alignment. Correct installation of the first course of blocks is most important to insure accurate and acceptable results of the entire wall.
2. **Reinforcement.** Install reinforcement for the block wall, as designed.
3. **Rock Toe Protection.** Construct the rock toe protection as shown on the Precast Modular Block Wall Detail and in accordance with the Riprap Toe Protection Technical Specification.
4. **Gravel Drain.** Construct the gravel drain as shown on the Precast Modular Block Wall Detail and in accordance with the Gravel Drain Technical Specification. Backfill to 1 foot behind blocks with the gravel drain. Place compacted backfill beyond the gravel drain as shown in the details.
5. **Block Wall Construction.** Install blocks and construct the wall per wall manufacturer's instructions. Place backfill as shown on the Precast Modular Block Wall Detail and in accordance with the Unclassified Backfill Technical Specification. Repeat procedure to the extent of wall height.

MAINTENANCE

Make all necessary repairs to the precast concrete retaining wall for the duration of the Contract.

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TECHNICAL SPECIFICATIONS

R-6 RIPRAP

SCOPE

This work is riprap, as shown on the Drawings, or as directed by the Inspector.

APPLICABLE PUBLICATIONS

Pub.408 - Specifications; Pennsylvania Department of Transportation.

Bulletin 15 - Approved Construction Materials; Pennsylvania Department of Transportation

MATERIALS AND STORAGE

A - General - Obtain materials from sources approved by the Inspector, but the approval of any source shall not be construed as approval of all materials from that source. Materials from required excavation may be used, provided they meet the requirements of these Technical Specifications.

B - Geotextile - Provide Class 4, Type A Geotextile, conforming with the requirements of Section 735 of Pub.408. Obtain geotextiles from a manufacturer listed in Bulletin 15.

During the periods of shipment and storage, protect geotextiles from direct sunlight, ultraviolet rays, temperatures greater than 140°F, mud, dirt, dust, and debris. To the extent possible, maintain geotextiles wrapped in a heavy-duty covering or shield from direct sunlight.

Geotextiles will be rejected at the time of installation if any defects, deterioration, or damage has occurred during manufacture, transportation, or storage.

C - Securing Pins for Geotextiles - Provide steel securing pins, 18 inches long x 3/16 inches in diameter, pointed at one end; and with a 1½-inch washer head at the other end. Alternate securing devices, approved by the Inspector, may be used.

D - Riprap - Obtain riprap from a source approved by the Inspector. Riprap shall consist of sound durable rock, insoluble in water. Friable, stratified rocks such as shales, and rocks liable to decompose in water, such as claystones, will not be approved. The Inspector shall reject localized areas, strata, or channels within an approved area or zone when, in its opinion, the material has disintegrated, weathered badly, or is otherwise unsatisfactory for the intended use. The materials shall be free of objectionable amounts of earth, quarry dust, or other materials; however, washing will not be required.

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Stone for riprap shall be block shaped with a specific gravity of at least 2.5. Smooth rounded stone or boulders; flat, thin, elongated, and slab-shaped stone shall not be acceptable. Not more than 25 percent of the stones reasonably well distributed throughout the gradation shall have a length more than two and one-half (2.5) times the breadth or thickness. No stone shall have a length exceeding three (3) times its breadth or thickness.

Riprap shall be R-6 gradation, conforming to Section 850 of Pub.408, except as noted above. The riprap shall be certified as to size and gradation and the Inspector shall accept the onsite riprap based on a visual inspection.

PROCEDURE

A - General - Thicknesses indicated on the Drawings are the placement thicknesses of riprap layers.

B - Foundation Preparation - Prepare the areas on which riprap is to be placed by excavating, trimming, and dressing to conform to cross sections and slopes shown on the Drawings. Bring up the low areas to grade by filling and compacting in accordance with the "Unclassified Fill" Specification, with materials comparable to adjacent foundation materials.

C - Geotextile - Use Class 4, Type A Geotextile.

Place the fabric on the prepared area in a loose, unstretched condition to minimize shifting, puncturing, or tearing the fabric. For stream slope protection, lay the fabric with the long dimension parallel to stream flow, and for protection of the entire stream, lay the fabric with the long dimension perpendicular to the centerline of the channel. Provide a minimum overlap of twelve (12) inches at the joints, with the upstream fabric over the downstream fabric and the upslope fabric over the downslope fabric. Anchor the fabrics in place by inserting securing pins through both fabrics at the overlaps at the spacing shown on the following table:

	STEEPER THAN		FLATTER THAN
SLOPE	3:1	4:1	4:1
SECURING PIN PACING ALONG OVERLAPS	2 FEET	3 FEET	5 FEET

Install additional pins as necessary to prevent any slippage of the fabrics.

Protect the fabrics at all times during construction from contamination by surface runoff. Place riprap or cover the fabric with approved covering material as soon as possible, so that Type A fabric is not exposed for more than two (2) weeks.

Do not drop rocks, two (2) feet or larger in any dimension directly on the fabric from a height greater than one (1) foot. Do not allow the riprap placement procedure to puncture or damage the fabric.

Repair and/or replace all damaged fabric to the satisfaction of, and at no additional cost.

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D - Riprap - Place stones for riprap on the geotextiles, in the dry, and conforming to the lines and grades shown on the Drawings or as directed by the Inspector. Place the stones in such manner as to produce a reasonably well-graded and uniform surface providing the full thickness shown on the Drawings. A tolerance of plus or minus three inches will be allowed in the finished surface except that either extreme of such tolerance shall not be continuous over an area greater than 200 square feet. Place stones to the full course thickness in one operation and without displacing the underlying material. Do not place stones in layers. The finished work shall be free from objectionable pockets of small stones and clusters of larger stones, and the entire mass of stones shall be roughly graded to conform to the gradation specified. Smaller stones shall be well distributed in order to chink the voids between larger stones, insofar as practicable. Do not place riprap by dumping stones into chutes or by similar methods, likely to cause segregation of the various sizes. Do not use a tractor equipped with bulldozer blade, stone rake, or any similar equipment. The desired distribution of the various sizes of stones throughout the mass shall be obtained by selective loading of the material at the quarry, by controlled dumping of successive loads during final placing, or by other approved methods. Rearrange individual stones by hand or mechanical means only to the extent necessary to break down bridging and to obtain a reasonably well-graded mass.

Provide cutoff at the upstream and downstream ends of riprap as shown on the Drawings, and do not allow any equipment to pass over the finished riprap surface.

MAINTENANCE - Make all necessary repairs to riprap for the duration of the Contract.

TECHNICAL SPECIFICATIONS

R-6 ROCKFILL

SCOPE

* For Toe Protection (Both Banks)

This work is rockfill, as shown on the Drawings, or as directed by the Inspector.

APPLICABLE PUBLICATIONS

Pub. 408	Specifications. Pennsylvania Department of Transportation.
Bulletin 14	Aggregate Producers. Pennsylvania Department of Transportation.

MATERIALS AND STORAGE

- A General** - Obtain materials from sources approved by the Inspector, but the approval of any source shall not be construed as approval of all materials from that source. Materials from required excavation may be used, provided they meet the requirements of these Technical Specifications.

- B Rockfill** - Rockfill shall consist of sound durable rock, insoluble in water. Friable, stratified rocks such as shales, and rocks liable to decompose in water, such as claystones, will not be approved. The Department shall reject localized areas, strata, or channels within an approved area or zone when, in its opinion, the material has disintegrated, weathered badly, or is otherwise unsatisfactory for the intended use. The materials shall be free of objectionable amounts of earth, quarry dust, or other materials; however, washing will not be required.

Stone for rockfill shall be block shaped with a specific gravity of at least 2.5. Smooth rounded stone or boulders, flat, thin, elongated, and slab-shaped stone shall not be acceptable. Not more than 25 percent of the stones reasonably well distributed throughout the gradation shall have a length more than 2.5 times the breadth or thickness. No stone shall have a length exceeding three times its breadth or thickness.

Rockfill shall be R-6 gradation, conforming to Section 850 of Pub. 408, except as noted above. The rockfill shall be certified as to size and gradation and the Inspector shall accept the onsite rockfill based on a visual inspection.

PROCEDURE

- A General** - Thickness indicated on the Drawings is the placement thickness of rockfill.

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- B Rockfill** - The rock shall be dumped and spread into place in approximately horizontal layers not more than 2 feet in thickness. The rock shall be placed so that the completed fill shall be graded with the smaller rock fragments placed in the inner portion of the embankment and the larger rock fragments placed on the outer slopes. It shall be placed in a manner that will produce a stable fill that contains no large unfilled spaces caused by bridging of the larger fragments.

MAINTENANCE - Make all necessary repairs to rockfill for the duration of the Contract.

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TECHNICAL SPECIFICATIONS

ROCK CONSTRUCTION ENTRANCE

SCOPE

This work is providing a construction entrance into a work site by placing rock aggregate adjacent to the public access or other access where possible erosion or dust can be a problem. Placement procedure should follow the plan detail drawing entitled "Standard Construction Detail #16, Rock Construction Entrance".

APPLICABLE PUBLICATIONS

Pub. 408 - Specifications, Pennsylvania Department of Transportation.

Bulletin 14 - Aggregate Producers, Pennsylvania Department of Transportation.

Bulletin 15 - Approved Construction Materials, Pennsylvania Department of Transportation.

MATERIALS

- A. **Coarse Aggregate** - Coarse aggregate shall be AASHTO #1 coarse aggregate, as specified in Section 703.2 of Publication 408. Obtain coarse aggregate from a PennDOT approved source.
- B. **Geotextile** - Geotextiles shall meet the requirements of Section 735 of Publication 408 for Class 1 geotextiles. Use a geotextile listed in Bulletin 15.

PROCEDURE

Place aggregate in the dry, and not on frozen ground. Identify location of construction entrance and layout an area not less than 20 feet wide by 50 feet long. This area is the minimum roadway size, the on-site inspector or the detail drawing may require larger entrance areas. Once the area and location have been determined then strip vegetation from the site and place the geotextile material over the entire area. Pins should be used to hold the material in place. Place the aggregate to a depth of eight (8) inches and compact the aggregate with mechanical tampers or other approved means.

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TECHNICAL SPECIFICATIONS

SEEDING

SCOPE

This work is securing a satisfactory stand of grass on all disturbed areas or where directed by the Inspector. This work includes preparing the seedbed, furnishing and applying lime and fertilizer, furnishing and sowing seed, furnishing and placing mulch, and maintaining the seeded areas.

APPLICABLE ACTS AND PUBLICATIONS

Pennsylvania Seed Act of 1965 (Act No. 187), as amended

Rules For Testing Seed, Association of Official Seed Analysts

Regulations of the Pennsylvania Department of Agriculture, Bureau of Plant Industry

Pennsylvania Agricultural Liming Materials Act of 1978, P.L.15, No.9, as amended

Specification No. L-36 (current issue), Pennsylvania Department of General Services, Bureau of Purchases, Division of Standards and Specifications

Agricultural Liming Materials Rules & Regulations (7 Pa. Code, Part V, Chapter 108)

Pennsylvania Soil Conditioner and Plant Growth Substance Law, Act of December 1, 1977, P.L.258, No.86 (3P.S.68.2) as amended

Bulletin 15 - Approved Construction Materials,
Pennsylvania Department of Transportation

MATERIALS

A. Grass Seed - Grass seed shall conform to the applicable acts and regulations specified above in these Technical Specifications, and shall consist of the following seed types and mixtures:

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PERMANENT SEEDING (for all areas – including levees, channels, lawns,
and parks)

Formula & Species	% Of Total Weight	Minimum Purity %	Minimum Germination %	Maximum Weed Seed %	Seed Application Rate Lbs./1000 SF
Kentucky Bluegrass Mix (poa pratensis) A blend of improved certified varieties, such as Vista, Baron, Fortuna, & Gnome, with no one variety exceeding 40% of total bluegrass component.	40	98	80	0.20	2.8
Strong Creeping Red Fescue or Chewings Fescue (festuca rubra). An improved certified variety, such as Pennlawn.	30	98	85	0.15	2.1
Fine Perennial Ryegrass Mix (lolium perenne) A blend of improved certified varieties, such as Pennefine, Regal, Manhattan, and Citation, with no one variety exceeding 50% of total ryegrass component.	30	98	90	0.15	2.1
Total Lbs./1000 SF					7.0

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TEMPORARY SEEDING (for borrow and spoil areas, and uncompleted areas where work will be delayed by 20 days or more)				
Formula & Species	Minimum Purity %	Minimum Germination %	Maximum Weed Seed %	Seed Application Rate Lbs./1000 SF
Annual Ryegrass (<i>Lolium multiflorum</i>)	98	90	0.15	2.0

No seed shall contain Canada Thistle, Field Bindweed, Johnson Grass, Perennial Sowthistle, Quackgrass, Horse Nettle, Bedstraw, Corncockle, Brassica Kaber, Brassica Nigra, Wild Onion, or Wild Garlic.

Each variety of specified seed shall be separately packaged and fully tagged. Seed shall be mixed in the presence of a representative of the Department. Premixed seed is acceptable, provided an inspection tag stamped, dated, and signed by the Pennsylvania Department of Agriculture inspector is sewn or stapled to the outside of each bag.

Seed which has become wet, moldy, or otherwise damaged in transit or storage, or has a mix date older than 9 months prior to sowing, or has a test date older than 6 months prior to sowing shall not be used.

B. Fertilizer - Fertilizer shall conform to the applicable acts specified in the section of these Technical Specifications titled, "Applicable Acts and Publications". Use dry formulation of 10-20-20-analysis.

Fertilizers shall be delivered in bags or other suitable containers, each fully labeled and bearing the name, trademark, and warranty of the producer.

C. Lime - Lime shall be pulverized agricultural limestone conforming to the applicable acts specified in the section of these Technical Specifications titled, "Applicable Acts and Publications". Lime shall conform to the requirements of Specification No. L-36, Group 1, Class B, Type MO and have an effective neutralizing power of not less than 64 when calculated, using the guaranteed chemical analysis and fineness, in accordance with the Agricultural Liming Materials Rules and Regulations.

D. Mulches - Mulches shall be free of foreign materials, coarse or woody materials such as tobacco and soybean stems, substances toxic to plant growth, and mature seed bearing stalks or roots of prohibited and noxious weeds as defined by law. Mulches shall be cut into lengths of not less than 6 inches and cured to less than 20 percent moisture content by weight.

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Mulches shall be hay, straw, or a combination both. Hay shall be timothy hay, mixed clover and timothy hay, or other approved native or forage grasses. Straw shall be either wheat or oat straw, reasonably free of viable seeds.

E. Mulch Binders - Mulch binders shall be nonasphaltic emulsions, of either a water soluble natural vegetable gum blended with gelling and hardening agents or a water soluble blend of hydrophylic polymers, viscosifiers, sticking aids, and gums. Obtain binders from a producer listed in Bulletin 15.

F. Water - Water shall be fresh and free from injurious amounts of oil, acid, alkali, salts, and any other materials that may be harmful to the growth of grass.

PROCEDURE

General - The application rates specified for seed, lime, fertilizer and mulch are minimum acceptable rates. The Department may, at its own expense, test the soils to determine if the specified lime and fertilizer application rates are appropriate. If the test results indicate a need for adjustment, do so at no additional cost to the Department and accept full responsibility for obtaining a satisfactory stand of grass.

A. Prepare Seed Bed by Shallow Tilling - After the Department has approved the final grading of areas to be seeded, thoroughly till the surface to a depth of 3 inches by discing, harrowing, or other approved means. Apply fertilizer at a rate of 750 pounds per acre. Apply lime at a rate of 5,000 pounds per acre. Work both thoroughly into the soil to a depth of 3 inches, to ensure satisfactory soil conditions conducive to sowing seed. Bring the surface to a smooth and even final grade. Immediately prior to sowing, rake the soil to a depth of 3/4 inch. Rake parallel to contour lines, not uphill or downhill. On lawn areas, remove all sticks, stones, weeds, roots, and other objectionable materials larger than 5/8 inches in any dimension. On all other areas to be seeded, remove sticks, stones, weeds, roots, and other objectionable materials larger than 2 inches in any dimension. Maintain the surface in a true and even condition while sowing the seed. If hydroseeding or grain drilling is employed, apply limestone and fertilizer as specified in the section of these Technical Specifications titled, "Materials". On areas that are steeper than 3:1, till the surface in the cross slope (horizontal) direction. Sufficiently scarify so as to break up surface crust and eliminate irregularities that may have been caused by soil erosion. Remove all objectionable materials from the surface.

B. Sow Seed - Sow the seed mixture on a still day at the minimum rate specified in the section of these Technical Specifications titled, "Materials". Do not sow seed on frozen or partially frozen ground. For best results, sow permanent seed from March 15 to June 15 for spring establishment or from August 15 to October 15 for fall establishment. Sow by hand or by approved sowing equipment in 2 applications. Sow one-half the seed while traveling in one direction and the other half while traveling at a right angle to the first direction. After seeding is complete, lightly rake, cultipack, or brush drag the surface, just deep enough to cover the seeds. Rake parallel to contour lines, not uphill or downhill.

Hydroseeding or grain drilling is acceptable, provided the Department approves all methods and equipment used. If hydroseeding is employed, fertilizer and limestone may be applied at the time of sowing. If grain drilling is employed, only fertilizer may be applied at the time of sowing, provided it does not come in contact with the seed. Drill parallel to contour lines, not uphill or downhill.

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C. Apply Mulch – Immediately after seeding, or within 6 hours after seeding is completed, spread mulch uniformly over the entire seeded area at a rate of 6,000 pounds (dry weight) per acre. The mulch shall be moist at the time of placement. To prevent the mulch from being blown away or bunched by the wind and to ensure the mulch cover holds the soil and seed in place, anchor the moist mulch to the soil by an approved means. On slopes where machinery cannot be used, hold the mulch in place by a means that will not be detrimental to subsequent operations. Nonasphaltic mulch binders may be applied uniformly over and through the mulch at the manufacturer's recommended rate.

MAINTENANCE

At no additional cost, maintain the seeded areas until all work under the Contract has been completed and accepted. Maintenance shall include refilling rain-washed gullies, reseeding, reapplying fertilizer, lime and mulch, and removal of large and noxious weeds, as directed by the Inspector.

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TECHNICAL SPECIFICATIONS

STREAM DIVERSION AND DEWATERING

SCOPE

This work is furnishing, installing, maintaining, and operating diversionary and dewatering works and equipment for the removal of surface water and groundwater to permit construction in the dry and removal of all diversionary and dewatering works and equipment after the construction is completed.

PROCEDURE

- A. Diverting Surface Water** – Build, maintain and operate cofferdams, channels, flumes, sumps and other diversionary works to divert surface water away from the work area while construction is in progress. Unless otherwise approved, a diversion must discharge into the same natural waterway in which its headwater is located.
- B. Dewatering the Construction Site** – Furnish, install, operate and maintain drains, sumps, pumps, casings, wellpoints and other equipment needed to dewater foundations, cutoff trenches and other areas of the construction site.
- C. Removal of Diversionary and Dewatering Works** – After construction is completed in an area, remove the temporary works and restore the area.
- D. Damage** – Losses or damage to any part of the work, permanent or temporary, or to private property, will be the responsibility of the Contractor.

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TECHNICAL SPECIFICATIONS

TOPSOILING

SCOPE

This work is topsoiling all areas where the Erosion Control Matting is placed if recommended by matting manufacturer or where the Inspector directs. The work includes preparing the area for topsoiling and excavating, hauling, depositing, and spreading loamy topsoil on the area.

MATERIALS

Select topsoil material from required excavation areas to the extent that it is available. If this does not provide sufficient topsoil material, the Contractor shall supply the remainder from sources of his own choosing and at his own expense, providing the material meets the following description:

Topsoil material shall consist of natural, friable loam, possessing characteristics of the best soils in the vicinity that produce heavy growths of crops, grass, and other vegetation. It shall be reasonably free of subsoil, clay lumps, stones, roots, other similar objects larger than 2-inches in diameter, brush, objectionable wood and litter, and other materials and substances that would be harmful to plant growth or be a hindrance to grading, planting, or maintaining.

PROCEDURE

- A. Prepare for Topsoiling** - On areas to be topsoiled, complete all grading necessary to bring the surface to the lines indicated on the Drawings and parallel to the proposed finished grade. These areas shall be free of rocks and other foreign materials 3-inches or greater in dimension.
- B. Place and Spread Topsoil** - Place topsoil only after the area to be covered has been shaped, trimmed, and finished, and all other construction work in and on the area has been completed. Do not place topsoil on ground that is frozen, excessively wet, extremely dry, or in a condition that is in anyway detrimental to proper grading and planting.

Place and spread topsoil over the areas indicated on the Drawings and designated by the Inspector. Place the topsoil as recommended by the Erosion Control Matting manufacturer.

- C. Suspension of Operation** - If soil or weather conditions are unsuitable, the Inspector will direct the Contractor to suspend his topsoil operations. Topsoil operations shall resume when the Inspector approves restart.

MAINTENANCE

Maintain the topsoiled areas, replacing all material washed or blown away, for the duration of the Contract.

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TECHNICAL SPECIFICATIONS

UNCLASSIFIED FILL

SCOPE

This work is filling areas with suitable materials, to the limits and grades shown on the Drawings, or as directed by the Inspector

MATERIALS

Obtain material from required excavation to the extent of its availability. The material need not be well graded but shall be free of clusters of large materials, organic matter, trash, and frozen and other objectionable materials. Unless otherwise specified by the Inspector, the material shall be granular and pervious. If necessary, sort the material and/or stockpile for later use at no additional cost.

PROCEDURE

Do not place material on frozen ground. Deposit material and compact to the satisfaction of the Inspector.

After completion of spreading and compacting, grade the area to the lines and grades shown on the Drawings, or as directed by the Inspector, in such a way that the area blends in with the surrounding terrain with the top surface sloped for drainage.

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**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project Name:	York County Flood Restoration Projects
Awarding Agency:	various municipalities in York County
Contract Award Date:	9/1/2019
Serial Number:	19-06405
Project Classification:	Highway
Determination Date:	8/20/2019
Assigned Field Office:	Harrisburg
Field Office Phone Number:	(717)787-4763
Toll Free Phone Number:	(800)932-0665
Project County:	York County

ENP-COHEN

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 19-06405 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Asbestos & Insulation Workers	6/26/2017		\$32.00	\$26.51	\$58.51
Asbestos & Insulation Workers	7/2/2018		\$32.80	\$26.76	\$59.56
Asbestos & Insulation Workers	7/2/2019		\$33.80	\$27.26	\$61.06
Asbestos & Insulation Workers	7/2/2020		\$32.80	\$30.01	\$62.81
Boilermaker (Commercial, Institutional, and Minor Repair Work)	3/1/2017		\$28.52	\$18.22	\$46.74
Boilermaker (Commercial, Institutional, and Minor Repair Work)	3/1/2018		\$29.52	\$18.22	\$47.74
Boilermaker (Commercial, Institutional, and Minor Repair Work)	1/1/2019		\$29.26	\$18.48	\$47.74
Boilermakers	1/1/2018		\$46.26	\$33.36	\$79.62
Boilermakers	3/1/2018		\$45.89	\$33.73	\$79.62
Boilermakers	1/1/2019		\$45.51	\$34.11	\$79.62
Boilermakers	8/1/2019		\$47.21	\$34.11	\$81.32
Bricklayer (Pointer, Cleaner, Caulker, Cement Mason, Plasterer, Tile Setter)	5/1/2018		\$29.00	\$21.30	\$50.30
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	5/1/2017		\$32.54	\$16.06	\$48.60
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	5/1/2018		\$32.95	\$16.45	\$49.40
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	5/1/2019		\$33.43	\$16.87	\$50.30
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	5/1/2020		\$33.99	\$17.31	\$51.30
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	5/1/2021		\$34.62	\$17.78	\$52.40
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2017		\$28.88	\$15.75	\$44.63
Cement Finishers	5/1/2017		\$28.05	\$21.30	\$49.35
Cement Masons	5/1/2019		\$29.90	\$21.35	\$51.25
Cement Masons	5/1/2019		\$29.05	\$22.50	\$51.55
Drywall Finisher	5/1/2017		\$23.30	\$12.39	\$35.69
Drywall Finisher	5/1/2019		\$23.82	\$14.27	\$38.09
Electricians	1/1/2018		\$31.93	\$18.27	\$50.20
Electricians	6/1/2018		\$30.60	\$23.63	\$54.23
Electricians	6/3/2019	12/31/2019	\$33.18	\$19.27	\$52.45
Electricians	1/1/2020	12/31/2020	\$33.84	\$20.01	\$53.85
Electricians	1/1/2021	12/31/2021	\$34.45	\$20.80	\$55.25
Electricians	1/1/2022		\$34.99	\$21.46	\$56.45
Elevator Constructor	1/1/2018		\$45.35	\$33.00	\$78.35
Glazier	5/1/2017		\$25.63	\$11.45	\$37.08
Glazier	5/1/2018		\$25.63	\$11.95	\$37.58
Glazier	5/1/2019		\$25.63	\$12.45	\$38.08
Glazier	5/1/2020		\$25.63	\$12.95	\$38.58
Glazier	5/1/2021		\$25.63	\$13.45	\$39.08
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	7/1/2017		\$31.33	\$28.42	\$59.75
Iron Workers (Bridge, Structural Steel, Ornamental,	7/1/2018		\$32.53	\$28.42	\$60.95

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 19-06405 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Precast, Reinforcing)					
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	7/1/2019		\$32.76	\$29.88	\$62.64
Laborers (Class 01 - See notes)	5/1/2017		\$21.39	\$13.33	\$34.72
Laborers (Class 01 - See notes)	5/1/2018	4/30/2019	\$21.84	\$13.93	\$35.77
Laborers (Class 01 - See notes)	5/1/2019	4/30/2020	\$22.29	\$14.63	\$36.92
Laborers (Class 01 - See notes)	5/1/2020		\$22.74	\$15.13	\$37.87
Laborers (Class 02 - See notes)	5/1/2017		\$23.39	\$13.33	\$36.72
Laborers (Class 02 - See notes)	5/1/2018	4/30/2019	\$23.84	\$13.93	\$37.77
Laborers (Class 02 - See notes)	5/1/2019	4/30/2020	\$24.29	\$14.63	\$38.92
Laborers (Class 02 - See notes)	5/1/2020		\$24.74	\$15.13	\$39.87
Laborers (Class 03 - See notes)	5/1/2017		\$23.77	\$13.62	\$37.39
Laborers (Class 03 - See notes)	5/1/2018	4/30/2019	\$24.27	\$14.22	\$38.49
Laborers (Class 03 - See notes)	5/1/2019	4/30/2020	\$24.82	\$14.82	\$39.64
Laborers (Class 03 - See notes)	5/1/2020		\$24.74	\$15.13	\$39.87
Laborers (Class 04 - See notes)	5/1/2017		\$25.27	\$13.62	\$38.89
Laborers (Class 04 - See notes)	5/1/2018	4/30/2019	\$25.77	\$14.22	\$39.99
Laborers (Class 04 - See notes)	5/1/2019	4/30/2020	\$26.32	\$14.82	\$41.14
Laborers (Class 04 - See notes)	5/1/2020		\$24.74	\$15.13	\$39.87
Laborers (Class 05 - See notes)	5/1/2017		\$25.77	\$13.62	\$39.39
Laborers (Class 05 - See notes)	5/1/2018	4/30/2019	\$26.27	\$14.22	\$40.49
Laborers (Class 05 - See notes)	5/1/2019	4/30/2020	\$26.82	\$14.82	\$41.64
Laborers (Class 05 - See notes)	5/1/2020		\$24.74	\$15.13	\$39.87
Laborers (Class 06 - See notes)	5/1/2017		\$23.39	\$13.33	\$36.72
Laborers (Class 06 - See notes)	5/1/2018	4/30/2019	\$23.84	\$13.93	\$37.77
Laborers (Class 06 - See notes)	5/1/2019	4/30/2020	\$24.29	\$14.63	\$38.92
Laborers (Class 06 - See notes)	5/1/2020		\$24.74	\$15.13	\$39.87
Marble Mason	5/1/2017		\$29.27	\$15.62	\$44.89
Marble Mason	5/1/2018		\$29.88	\$16.01	\$45.89
Marble Mason	5/1/2019		\$30.46	\$16.43	\$46.89
Marble Mason	5/1/2020		\$31.02	\$16.87	\$47.89
Marble Mason	5/1/2021		\$31.55	\$17.34	\$48.89
Millwright	5/1/2017		\$33.79	\$18.16	\$51.95
Millwright	5/1/2018	4/30/2019	\$34.41	\$18.64	\$53.05
Millwright	5/1/2019	4/30/2020	\$35.30	\$18.90	\$54.20
Millwright	5/1/2020		\$36.04	\$19.31	\$55.35
Operators (Building, Class 01 - See Notes)	5/1/2017		\$35.24	\$24.58	\$59.82
Operators (Building, Class 01 - See Notes)	5/1/2018		\$36.78	\$25.03	\$61.81
Operators (Building, Class 01 - See Notes)	5/1/2019		\$38.32	\$25.49	\$63.81
Operators (Building, Class 01 - See Notes)	5/1/2020		\$39.87	\$25.94	\$65.81
Operators (Building, Class 01 - See Notes)	5/1/2021		\$41.41	\$26.40	\$67.81
Operators (Building, Class 01A - See Notes)	5/1/2017		\$37.49	\$25.23	\$62.72
Operators (Building, Class 01A - See Notes)	5/1/2018		\$39.03	\$25.69	\$64.72
Operators (Building, Class 01A - See Notes)	5/1/2019		\$40.57	\$26.15	\$66.72
Operators (Building, Class 01A - See Notes)	5/1/2020		\$42.12	\$26.60	\$68.72

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 19-06405 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Operators (Building, Class 01A - See Notes)	5/1/2021		\$43.66	\$27.06	\$70.72
Operators (Building, Class 02 - See Notes)	5/1/2017		\$34.96	\$24.49	\$59.45
Operators (Building, Class 02 - See Notes)	5/1/2018		\$36.50	\$24.95	\$61.45
Operators (Building, Class 02 - See Notes)	5/1/2019		\$38.05	\$25.39	\$63.44
Operators (Building, Class 02 - See Notes)	5/1/2020		\$39.59	\$25.84	\$65.43
Operators (Building, Class 02 - See Notes)	5/1/2021		\$41.13	\$26.30	\$67.43
Operators (Building, Class 02A - See Notes)	5/1/2017		\$37.21	\$25.16	\$62.37
Operators (Building, Class 02A - See Notes)	5/1/2018		\$38.75	\$25.61	\$64.36
Operators (Building, Class 02A - See Notes)	5/1/2019		\$40.30	\$26.06	\$66.36
Operators (Building, Class 02A - See Notes)	5/1/2021		\$43.38	\$26.98	\$70.36
Operators (Building, Class 03 - See Notes)	5/1/2017		\$32.23	\$23.68	\$55.91
Operators (Building, Class 03 - See Notes)	5/1/2018		\$33.78	\$24.12	\$57.90
Operators (Building, Class 03 - See Notes)	5/1/2019		\$35.32	\$24.59	\$59.91
Operators (Building, Class 03 - See Notes)	5/1/2020		\$36.86	\$25.05	\$61.91
Operators (Building, Class 03 - See Notes)	5/1/2021		\$38.41	\$25.50	\$63.91
Operators (Building, Class 04 - See Notes)	5/1/2017		\$30.33	\$22.12	\$52.45
Operators (Building, Class 04 - See Notes)	5/1/2018		\$32.63	\$23.80	\$56.43
Operators (Building, Class 04 - See Notes)	5/1/2019		\$34.17	\$24.27	\$58.44
Operators (Building, Class 04 - See Notes)	5/1/2020		\$35.73	\$24.71	\$60.44
Operators (Building, Class 04 - See Notes)	5/1/2021		\$37.26	\$25.18	\$62.44
Operators (Building, Class 05 - See Notes)	5/1/2017		\$29.87	\$21.99	\$51.86
Operators (Building, Class 05 - See Notes)	5/1/2018		\$32.18	\$23.69	\$55.87
Operators (Building, Class 05 - See Notes)	5/1/2019		\$32.19	\$25.67	\$57.86
Operators (Building, Class 05 - See Notes)	5/1/2020		\$35.28	\$24.59	\$59.87
Operators (Building, Class 05 - See Notes)	5/1/2021		\$36.82	\$25.04	\$61.86
Operators (Building, Class 06 - See Notes)	5/1/2017		\$29.00	\$21.72	\$50.72
Operators (Building, Class 06 - See Notes)	5/1/2018		\$31.31	\$23.41	\$54.72
Operators (Building, Class 06 - See Notes)	5/1/2019		\$32.86	\$23.86	\$56.72
Operators (Building, Class 06 - See Notes)	5/1/2020		\$34.40	\$24.32	\$58.72
Operators (Building, Class 06 - See Notes)	5/1/2021		\$35.95	\$24.77	\$60.72
Operators (Building, Class 07A- See Notes)	5/1/2017		\$42.44	\$28.13	\$70.57
Operators (Building, Class 07A- See Notes)	5/1/2018		\$44.29	\$28.68	\$72.97
Operators (Building, Class 07A- See Notes)	5/1/2019		\$46.15	\$29.22	\$75.37
Operators (Building, Class 07A- See Notes)	5/1/2020		\$48.00	\$29.77	\$77.77
Operators (Building, Class 07A- See Notes)	5/1/2021		\$49.86	\$30.31	\$80.17
Operators (Building, Class 07B- See Notes)	5/1/2017		\$42.09	\$28.03	\$70.12
Operators (Building, Class 07B- See Notes)	5/1/2018		\$43.95	\$28.58	\$72.53
Operators (Building, Class 07B- See Notes)	5/1/2019		\$45.80	\$29.12	\$74.92
Operators (Building, Class 07B- See Notes)	5/1/2020		\$47.65	\$29.67	\$77.32
Operators (Building, Class 07B- See Notes)	5/1/2021		\$49.51	\$30.20	\$79.71
Painters Class 1 (see notes)	5/1/2017		\$23.47	\$13.32	\$36.79
Painters Class 1 (see notes)	5/1/2018		\$23.92	\$14.37	\$38.29
Painters Class 1 (see notes)	5/1/2019		\$24.57	\$15.22	\$39.79
Painters Class 2 (see notes)	5/1/2017		\$25.60	\$13.32	\$38.92

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 19-06405 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Painters Class 2 (see notes)	5/1/2018		\$26.05	\$14.37	\$40.42
Painters Class 2 (see notes)	5/1/2019		\$26.70	\$15.22	\$41.92
Painters Class 3 (see notes)	5/1/2017		\$31.35	\$13.32	\$44.67
Painters Class 3 (see notes)	5/1/2018		\$31.80	\$14.37	\$46.17
Pile Driver Divers (Building, Heavy, Highway)	1/1/2017		\$49.13	\$17.95	\$67.08
Piledrivers	1/1/2018		\$33.55	\$18.55	\$52.10
Piledrivers	1/1/2019		\$34.30	\$19.30	\$53.60
Plasterers (Use Cement Masons)	5/1/2018		\$29.00	\$21.30	\$50.30
Plasterers	5/1/2017		\$24.23	\$21.38	\$45.61
Plasterers	5/1/2019		\$26.73	\$20.63	\$47.36
Plumber/Pipefitter	5/1/2017		\$35.82	\$24.51	\$60.33
Plumber/Pipefitter	5/1/2018		\$36.87	\$25.26	\$62.13
Plumber/Pipefitter	5/1/2019		\$37.52	\$26.41	\$63.93
Roofers (Composition)	5/1/2017		\$36.15	\$30.22	\$66.37
Roofers (Composition)	5/1/2018		\$37.15	\$31.27	\$68.42
Roofers (Composition)	5/1/2019		\$38.35	\$31.80	\$70.15
Roofers (Shingle)	5/1/2016		\$25.70	\$19.17	\$44.87
Roofers (Shingle)	5/1/2019		\$28.50	\$20.87	\$49.37
Roofers (Slate & Tile)	5/1/2016		\$28.70	\$19.17	\$47.87
Roofers (Slate & Tile)	5/1/2018		\$30.50	\$20.37	\$50.87
Roofers (Slate & Tile)	5/1/2019		\$31.50	\$20.87	\$52.37
Sheet Metal Workers	6/1/2017		\$33.98	\$35.40	\$69.38
Sheet Metal Workers	6/1/2018		\$34.78	\$36.45	\$71.23
Sheet Metal Workers	6/1/2019		\$41.85	\$37.65	\$79.50
Sprinklerfitters	4/1/2017		\$37.40	\$21.74	\$59.14
Sprinklerfitters	4/1/2018		\$38.80	\$22.74	\$61.54
Terrazzo Finisher	5/1/2017		\$31.64	\$15.62	\$47.26
Terrazzo Finisher	5/1/2018		\$32.35	\$15.91	\$48.26
Terrazzo Finisher	5/1/2019		\$33.04	\$16.22	\$49.26
Terrazzo Setter	5/1/2017		\$30.63	\$18.85	\$49.48
Terrazzo Setter	5/1/2018		\$31.23	\$19.25	\$50.48
Terrazzo Setter	5/1/2019		\$31.81	\$19.67	\$51.48
Tile & Marble Finisher	5/1/2017		\$26.89	\$13.86	\$40.75
Tile & Marble Finisher	5/1/2018		\$27.60	\$14.15	\$41.75
Tile & Marble Finisher	5/1/2019		\$28.29	\$14.46	\$42.75
Tile & Marble Finisher	5/1/2020		\$28.96	\$14.79	\$43.75
Tile & Marble Finisher	5/1/2021		\$29.61	\$15.14	\$44.75
Tile Setter	5/1/2017		\$29.27	\$15.62	\$44.89
Tile Setter	5/1/2018		\$29.88	\$16.01	\$45.89
Tile Setter	5/1/2019		\$30.46	\$16.43	\$46.89
Tile Setter	5/1/2020		\$31.02	\$16.87	\$47.89
Tile Setter	5/1/2021		\$31.55	\$17.34	\$48.89
Truckdriver class 1(see notes)	5/1/2017		\$34.47	\$0.00	\$34.47
Truckdriver class 1(see notes)	5/1/2018		\$35.32	\$0.00	\$35.32

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 19-06405 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Truckdriver class 1(see notes)	5/1/2019		\$36.12	\$0.00	\$36.12
Truckdriver class 2 (see notes)	5/1/2017		\$34.54	\$0.00	\$34.54
Truckdriver class 2 (see notes)	5/1/2018		\$35.39	\$0.00	\$35.39
Truckdriver class 2 (see notes)	5/1/2019		\$36.19	\$0.00	\$36.19
Truckdriver class 3 (see notes)	5/1/2017		\$35.03	\$0.00	\$35.03
Truckdriver class 3 (see notes)	5/1/2018		\$35.88	\$0.00	\$35.88
Truckdriver class 3 (see notes)	5/1/2019		\$36.68	\$0.00	\$36.68

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 19-06405 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Carpenter	5/1/2018		\$30.75	\$15.96	\$46.71
Carpenter	5/1/2019		\$31.51	\$16.55	\$48.06
Carpenter	5/1/2020		\$32.22	\$17.19	\$49.41
Carpenter	5/1/2021		\$33.12	\$17.74	\$50.86
Carpenters	5/1/2017		\$30.12	\$15.34	\$45.46
Cement Finishers	6/1/2016		\$27.60	\$20.85	\$48.45
Electric Lineman	5/29/2017		\$44.22	\$23.94	\$68.16
Electric Lineman	5/28/2018		\$45.25	\$24.94	\$70.19
Electric Lineman	5/27/2019		\$46.32	\$25.97	\$72.29
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	7/1/2017		\$31.33	\$28.42	\$59.75
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	7/1/2018		\$32.53	\$28.42	\$60.95
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	7/1/2019		\$32.76	\$29.88	\$62.64
Laborers (Class 01 - See notes)	5/1/2016		\$19.81	\$15.79	\$35.60
Laborers (Class 01 - See notes)	5/1/2017		\$20.36	\$16.29	\$36.65
Laborers (Class 01 - See notes)	5/1/2018		\$20.96	\$16.79	\$37.75
Laborers (Class 01 - See notes)	5/1/2019		\$21.61	\$17.29	\$38.90
Laborers (Class 02 - See notes)	5/1/2016		\$26.43	\$15.79	\$42.22
Laborers (Class 02 - See notes)	5/1/2017		\$26.98	\$16.29	\$43.27
Laborers (Class 02 - See notes)	5/1/2018		\$27.58	\$16.79	\$44.37
Laborers (Class 02 - See notes)	5/1/2019		\$28.23	\$17.29	\$45.52
Laborers (Class 03 - See notes)	5/1/2016		\$23.42	\$15.79	\$39.21
Laborers (Class 03 - See notes)	5/1/2017		\$23.97	\$16.29	\$40.26
Laborers (Class 03 - See notes)	5/1/2018		\$24.57	\$16.79	\$41.36
Laborers (Class 03 - See notes)	5/1/2019		\$25.22	\$17.29	\$42.51
Laborers (Class 04 - See notes)	5/1/2016		\$23.77	\$15.79	\$39.56
Laborers (Class 04 - See notes)	5/1/2017		\$24.32	\$16.29	\$40.61
Laborers (Class 04 - See notes)	5/1/2018		\$24.92	\$16.79	\$41.71
Laborers (Class 04 - See notes)	5/1/2019		\$25.57	\$17.29	\$42.86
Laborers (Class 05 - See notes)	5/1/2016		\$24.44	\$15.79	\$40.23
Laborers (Class 05 - See notes)	5/1/2017		\$24.99	\$16.29	\$41.28
Laborers (Class 05 - See notes)	5/1/2018		\$25.59	\$16.79	\$42.38
Laborers (Class 05 - See notes)	5/1/2019		\$26.24	\$17.29	\$43.53
Laborers (Class 06 - See notes)	5/1/2016		\$23.86	\$15.79	\$39.65
Laborers (Class 06 - See notes)	5/1/2017		\$24.41	\$16.29	\$40.70
Laborers (Class 06 - See notes)	5/1/2018		\$25.01	\$16.79	\$41.80
Laborers (Class 06 - See notes)	5/1/2019		\$25.66	\$17.29	\$42.95
Laborers (Class 07 - See notes)	5/1/2016		\$24.15	\$15.79	\$39.94
Laborers (Class 07 - See notes)	5/1/2017		\$24.70	\$16.29	\$40.99
Laborers (Class 07 - See notes)	5/1/2018		\$25.30	\$16.79	\$42.09
Laborers (Class 07 - See notes)	5/1/2019		\$25.95	\$17.29	\$43.24
Laborers (Class 08 - See notes)	5/1/2016		\$24.63	\$15.79	\$40.42
Laborers (Class 08 - See notes)	5/1/2017		\$25.18	\$16.29	\$41.47

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 19-06405 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Laborers (Class 08 - See notes)	5/1/2018		\$25.78	\$16.79	\$42.57
Laborers (Class 08 - See notes)	5/1/2019		\$26.43	\$17.29	\$43.72
Operators (Building/Heavy, Class 01 - See Notes)	5/1/2016		\$32.16	\$22.64	\$54.80
Operators (Building/Heavy, Class 01 - See Notes)	5/1/2017		\$33.80	\$24.16	\$57.96
Operators (Building/Heavy, Class 01 - See Notes)	5/1/2018		\$35.35	\$24.61	\$59.96
Operators (Building/Heavy, Class 01 - See Notes)	5/1/2019		\$36.90	\$25.06	\$61.96
Operators (Building/Heavy, Class 01 - See Notes)	5/1/2020		\$38.44	\$25.52	\$63.96
Operators (Building/Heavy, Class 01 - See Notes)	5/1/2021		\$39.98	\$25.97	\$65.95
Operators (Building/Heavy, Class 01a - See Notes)	5/1/2017		\$36.05	\$24.82	\$60.87
Operators (Building/Heavy, Class 01a - See Notes)	5/1/2018		\$37.60	\$25.27	\$62.87
Operators (Building/Heavy, Class 01a - See Notes)	5/1/2019		\$39.14	\$25.73	\$64.87
Operators (Building/Heavy, Class 01a - See Notes)	5/1/2020		\$40.69	\$26.19	\$66.88
Operators (Building/Heavy, Class 01a - See Notes)	5/1/2021		\$42.24	\$26.64	\$68.88
Operators (Building/Heavy, Class 02 - See Notes)	5/1/2017		\$33.52	\$24.07	\$57.59
Operators (Building/Heavy, Class 02 - See Notes)	5/1/2018		\$35.07	\$24.52	\$59.59
Operators (Building/Heavy, Class 02 - See Notes)	5/1/2019		\$36.61	\$24.98	\$61.59
Operators (Building/Heavy, Class 02 - See Notes)	5/1/2020		\$38.16	\$25.44	\$63.60
Operators (Building/Heavy, Class 02 - See Notes)	5/1/2021		\$39.70	\$25.89	\$65.59
Operators (Building/Heavy, Class 02a - See Notes)	5/1/2017		\$35.78	\$24.72	\$60.50
Operators (Building/Heavy, Class 02a - See Notes)	5/1/2018		\$37.32	\$25.19	\$62.51
Operators (Building/Heavy, Class 02a - See Notes)	5/1/2019		\$38.87	\$25.64	\$64.51
Operators (Building/Heavy, Class 02a - See Notes)	5/1/2020		\$40.41	\$26.10	\$66.51
Operators (Building/Heavy, Class 02a - See Notes)	5/1/2021		\$41.95	\$26.56	\$68.51
Operators (Building/Heavy, Class 03 - See Notes)	5/1/2017		\$30.60	\$23.21	\$53.81
Operators (Building/Heavy, Class 03 - See Notes)	5/1/2018		\$32.15	\$23.66	\$55.81
Operators (Building/Heavy, Class 03 - See Notes)	5/1/2019		\$32.15	\$25.66	\$57.81
Operators (Building/Heavy, Class 03 - See Notes)	5/1/2020		\$35.23	\$24.57	\$59.80
Operators (Building/Heavy, Class 03 - See Notes)	5/1/2021		\$36.78	\$25.03	\$61.81
Operators (Building/Heavy, Class 04 - See Notes)	5/1/2017		\$29.47	\$22.88	\$52.35
Operators (Building/Heavy, Class 04 - See Notes)	5/1/2018		\$31.01	\$23.32	\$54.33
Operators (Building/Heavy, Class 04 - See Notes)	5/1/2019		\$31.01	\$25.33	\$56.34
Operators (Building/Heavy, Class 04 - See Notes)	5/1/2020		\$33.65	\$24.11	\$57.76
Operators (Building/Heavy, Class 04 - See Notes)	5/1/2021		\$35.64	\$24.69	\$60.33
Operators (Building/Heavy, Class 05 - See Notes)	5/1/2017		\$29.02	\$22.74	\$51.76
Operators (Building/Heavy, Class 05 - See Notes)	5/1/2018		\$30.56	\$23.20	\$53.76
Operators (Building/Heavy, Class 05 - See Notes)	5/1/2019		\$32.11	\$23.65	\$55.76
Operators (Building/Heavy, Class 05 - See Notes)	5/1/2020		\$33.65	\$24.11	\$57.76
Operators (Building/Heavy, Class 05 - See Notes)	5/1/2021		\$35.20	\$24.56	\$59.76
Operators (Building/Heavy, Class 06 - See Notes)	5/1/2017		\$28.14	\$22.49	\$50.63
Operators (Building/Heavy, Class 06 - See Notes)	5/1/2018		\$29.68	\$22.93	\$52.61
Operators (Building/Heavy, Class 06 - See Notes)	5/1/2019		\$31.22	\$23.40	\$54.62
Operators (Building/Heavy, Class 06 - See Notes)	5/1/2020		\$32.78	\$23.84	\$56.62
Operators (Building/Heavy, Class 06 - See Notes)	5/1/2021		\$34.31	\$24.31	\$58.62
Operators (Heavy, Class 07A - See Notes)	5/1/2017		\$40.73	\$27.63	\$68.36

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 19-06405 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Operators (Heavy, Class 07A - See Notes)	5/1/2018		\$42.58	\$28.18	\$70.76
Operators (Heavy, Class 07A - See Notes)	5/1/2019		\$44.43	\$28.73	\$73.16
Operators (Heavy, Class 07A - See Notes)	5/1/2020		\$46.28	\$29.27	\$75.55
Operators (Heavy, Class 07A - See Notes)	5/1/2021		\$48.14	\$29.83	\$77.97
Operators (Heavy, Class 07B - See Notes)	5/1/2017		\$40.38	\$27.53	\$67.91
Operators (Heavy, Class 07B - See Notes)	5/1/2018		\$42.23	\$28.09	\$70.32
Operators (Heavy, Class 07B - See Notes)	5/1/2019		\$42.54	\$30.17	\$72.71
Operators (Heavy, Class 07B - See Notes)	5/1/2020		\$45.94	\$29.17	\$75.11
Operators (Heavy, Class 07B - See Notes)	5/1/2021		\$47.79	\$29.71	\$77.50
Operators (Highway, Class 01 - See Notes)	5/1/2016		\$32.16	\$22.64	\$54.80
Operators (Highway, Class 01 - See Notes)	5/1/2017		\$32.93	\$23.87	\$56.80
Operators (Highway, Class 01 - See Notes)	5/1/2018		\$34.47	\$24.33	\$58.80
Operators (Highway, Class 01 - See Notes)	5/1/2019		\$34.47	\$26.33	\$60.80
Operators (Highway, Class 01 - See Notes)	5/1/2020		\$37.56	\$25.24	\$62.80
Operators (Highway, Class 01 - See Notes)	5/1/2021		\$39.10	\$25.70	\$64.80
Operators (Highway, Class 01a - See Notes)	5/1/2017		\$35.18	\$24.56	\$59.74
Operators (Highway, Class 01a - See Notes)	5/1/2018		\$36.72	\$25.01	\$61.73
Operators (Highway, Class 01a - See Notes)	5/1/2019		\$38.27	\$25.46	\$63.73
Operators (Highway, Class 01a - See Notes)	5/1/2020		\$39.81	\$25.92	\$65.73
Operators (Highway, Class 01a - See Notes)	5/1/2021		\$41.35	\$26.38	\$67.73
Operators (Highway, Class 02 - See Notes)	5/1/2016		\$30.98	\$22.31	\$53.29
Operators (Highway, Class 02 - See Notes)	5/1/2017		\$31.75	\$23.53	\$55.28
Operators (Highway, Class 02 - See Notes)	5/1/2018		\$33.30	\$23.98	\$57.28
Operators (Highway, Class 02 - See Notes)	5/1/2019		\$33.29	\$25.99	\$59.28
Operators (Highway, Class 02 - See Notes)	5/1/2020		\$36.38	\$24.90	\$61.28
Operators (Highway, Class 02 - See Notes)	5/1/2021		\$37.93	\$25.35	\$63.28
Operators (Highway, Class 03 - See Notes)	5/1/2016		\$30.28	\$22.10	\$52.38
Operators (Highway, Class 03 - See Notes)	5/1/2017		\$31.06	\$23.32	\$54.38
Operators (Highway, Class 03 - See Notes)	5/1/2018		\$32.59	\$23.80	\$56.39
Operators (Highway, Class 03 - See Notes)	5/1/2019		\$32.59	\$25.79	\$58.38
Operators (Highway, Class 03 - See Notes)	5/1/2020		\$35.69	\$24.69	\$60.38
Operators (Highway, Class 03 - See Notes)	5/1/2021		\$37.23	\$25.16	\$62.39
Operators (Highway, Class 04 - See Notes)	5/1/2016		\$29.82	\$21.98	\$51.80
Operators (Highway, Class 04 - See Notes)	5/1/2017		\$30.60	\$23.20	\$53.80
Operators (Highway, Class 04 - See Notes)	5/1/2018		\$32.14	\$23.66	\$55.80
Operators (Highway, Class 04 - See Notes)	5/1/2019		\$32.14	\$25.66	\$57.80
Operators (Highway, Class 04 - See Notes)	5/1/2020		\$35.23	\$24.57	\$59.80
Operators (Highway, Class 04 - See Notes)	5/1/2021		\$36.77	\$25.03	\$61.80
Operators (Highway, Class 05 - See Notes)	5/1/2016		\$29.31	\$21.83	\$51.14
Operators (Highway, Class 05 - See Notes)	5/1/2017		\$30.08	\$23.06	\$53.14
Operators (Highway, Class 05 - See Notes)	5/1/2018		\$31.63	\$23.51	\$55.14
Operators (Highway, Class 05 - See Notes)	5/1/2019		\$31.63	\$25.51	\$57.14
Operators (Highway, Class 05 - See Notes)	5/1/2020		\$34.72	\$24.42	\$59.14
Operators (Highway, Class 05 - See Notes)	5/1/2021		\$36.26	\$24.87	\$61.13

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 19-06405 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Operators (Highway, Class 06 - See Notes)	5/1/2016		\$32.40	\$22.70	\$55.10
Operators (Highway, Class 06 - See Notes)	5/1/2017		\$33.17	\$23.94	\$57.11
Operators (Highway, Class 06 - See Notes)	5/1/2018		\$34.71	\$24.39	\$59.10
Operators (Highway, Class 06 - See Notes)	5/1/2019		\$34.71	\$26.39	\$61.10
Operators (Highway, Class 06 - See Notes)	5/1/2020		\$37.79	\$25.30	\$63.09
Operators (Highway, Class 06 - See Notes)	5/1/2021		\$39.33	\$25.78	\$65.11
Operators (Highway, Class 06/A - See Notes)	5/1/2016		\$34.65	\$23.36	\$58.01
Operators (Highway, Class 06/A - See Notes)	5/1/2017		\$35.42	\$24.59	\$60.01
Operators (Highway, Class 06/A - See Notes)	5/1/2018		\$36.96	\$25.05	\$62.01
Operators (Highway, Class 06/A - See Notes)	5/1/2019		\$36.96	\$27.05	\$64.01
Operators (Highway, Class 06/A - See Notes)	5/1/2020		\$40.04	\$25.97	\$66.01
Operators (Highway, Class 06/A - See Notes)	5/1/2021		\$41.58	\$26.43	\$68.01
Operators (Highway, Class 07/A - See Notes)	5/1/2016		\$38.56	\$25.99	\$64.55
Operators (Highway, Class 07/A - See Notes)	5/1/2017		\$39.66	\$27.31	\$66.97
Operators (Highway, Class 07/A - See Notes)	5/1/2018		\$41.52	\$27.84	\$69.36
Operators (Highway, Class 07/A - See Notes)	5/1/2019		\$41.82	\$29.95	\$71.77
Operators (Highway, Class 07/A - See Notes)	5/1/2020		\$45.23	\$28.94	\$74.17
Operators (Highway, Class 07/A - See Notes)	5/1/2021		\$47.08	\$29.49	\$76.57
Operators (Highway, Class 07/B - See Notes)	5/1/2016		\$37.17	\$25.57	\$62.74
Operators (Highway, Class 07/B - See Notes)	5/1/2017		\$38.25	\$26.89	\$65.14
Operators (Highway, Class 07/B - See Notes)	5/1/2018		\$40.10	\$27.44	\$67.54
Operators (Highway, Class 07/B - See Notes)	5/1/2019		\$40.41	\$29.53	\$69.94
Operators (Highway, Class 07/B - See Notes)	5/1/2020		\$43.81	\$28.53	\$72.34
Operators (Highway, Class 07/B - See Notes)	5/1/2021		\$45.66	\$29.08	\$74.74
Painters Class 1 (see notes)	5/1/2018		\$23.92	\$14.37	\$38.29
Painters Class 2 (see notes)	5/1/2018		\$26.05	\$14.37	\$40.42
Painters Class 3 (see notes)	5/1/2018		\$31.80	\$14.37	\$46.17
Painters Class 3 (see notes)	5/1/2019		\$32.45	\$15.22	\$47.67
Pile Driver Divers (Building, Heavy, Highway)	1/1/2017		\$49.13	\$17.95	\$67.08
Piledrivers	1/1/2017		\$32.75	\$17.95	\$50.70
Piledrivers	1/1/2018		\$33.55	\$18.55	\$52.10
Piledrivers	5/1/2018		\$30.75	\$15.96	\$46.71
Piledrivers	1/1/2019		\$34.30	\$19.30	\$53.60
Piledrivers	5/1/2019		\$31.51	\$16.55	\$48.06
Piledrivers	5/1/2020		\$32.22	\$17.19	\$49.41
Piledrivers	5/1/2021		\$33.12	\$17.74	\$50.86
Steamfitters (Heavy and Highway - Gas Distribution)	5/1/2017		\$40.98	\$32.53	\$73.51
Truckdriver class 1(see notes)	5/1/2016		\$33.57	\$0.00	\$33.57
Truckdriver class 1(see notes)	5/1/2017		\$34.47	\$0.00	\$34.47
Truckdriver class 1(see notes)	5/1/2018		\$35.32	\$0.00	\$35.32
Truckdriver class 1(see notes)	5/1/2019		\$36.12	\$0.00	\$36.12
Truckdriver class 2 (see notes)	5/1/2016		\$33.64	\$0.00	\$33.64
Truckdriver class 2 (see notes)	5/1/2017		\$34.54	\$0.00	\$34.54
Truckdriver class 2 (see notes)	5/1/2018		\$35.39	\$0.00	\$35.39

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 19-06405 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Truckdriver class 2 (see notes)	5/1/2019		\$36.19	\$0.00	\$36.19
Truckdriver class 3 (see notes)	5/1/2016		\$34.13	\$0.00	\$34.13
Truckdriver class 3 (see notes)	5/1/2017		\$35.03	\$0.00	\$35.03
Truckdriver class 3 (see notes)	5/1/2018		\$35.88	\$0.00	\$35.88
Truckdriver class 3 (see notes)	5/1/2019		\$36.68	\$0.00	\$36.68