

MWalaan@pgh2o.com
Direct Dial: 412.255.2289

January 3, 2024

VIA ELECTRONIC FILING

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building, 2nd Floor
Harrisburg, PA 17120

Re: Public Utility Municipal Contract – Reimbursement Agreement between The City of Pittsburgh and Pittsburgh Water and Sewer Authority for utility adjustment in connection with the Charles Anderson Memorial Bridge Project

Dear Secretary Chiavetta:

Please be advised that the above-reference Public Utility Municipal Contract (dated December 19, 2023) (“Agreement”) between Pittsburgh Water and Sewer Authority (“PWSA”) and The City of Pittsburgh was filed with the Commission by PWSA on January 3, 2024.

Should you have any questions regarding the enclosed Public Utility Municipal Contract, please contact me at 412-255-2289.

Very truly yours,

/s/ Monica Walaan
Monica Walaan, Esquire
Pa. Attorney Id. #318624

Enclosures

cc: Patrick Cicero, Esq., Office of Consumer Advocate
NazAarah Sabree, Office of Small Business Advocate
Richard Kanaskie, PUC Bureau of Investigation and Enforcement



**REIMBURSEMENT AGREEMENT
BETWEEN THE CITY OF PITTSBURGH AND THE PITTSBURGH WATER AND SEWER
AUTHORITY FOR UTILITY ADJUSTMENT IN CONNECTION WITH THE
CHARLES ANDERSON MEMORIAL BRIDGE PROJECT**

THIS AGREEMENT, made and entered into as of

12/19/2023

by and between the

THE CITY OF PITTSBURGH, a Municipal Corporation existing under the laws of the Commonwealth of Pennsylvania (the "CITY"),

A
N
D

THE PITTSBURGH WATER AND SEWER AUTHORITY, a municipal authority organized and existing under the laws of the Commonwealth of Pennsylvania and having a principal place of business located at Penn Liberty Plaza 1, 1200 Penn Avenue, Pittsburgh PA 15222, ("PWSA").

WITNESSETH:

WHEREAS, the CITY is advancing the Charles Anderson Memorial Bridge rehabilitation project, which will consist of full structure painting, sidewalk and roadway replacement, steel repairs, bearing replacement and substructure repairs including abutments and piers, in the City's South Oakland neighborhood, ("PROJECT"); and

WHEREAS, the CITY is about to construct the PROJECT; and

WHEREAS, the PWSA owns and/or leases and operates a water and sewer system in City of Pittsburgh; and

WHEREAS, Pursuant to Resolution No. 651 of 2023, the Council of the CITY has authorized the Mayor and the Director of the Department of Mobility and Infrastructure, on behalf of the CITY, to enter into a Reimbursement Agreement with PWSA for certain utility adjustment work in connection with the PROJECT; and

WHEREAS, this PROJECT is being made under the terms of an Agreement to be entered into between the CITY and Commonwealth of Pennsylvania, Department of Transportation, which provides,

inter alia, that the Pennsylvania Department of Transportation (“PENNDOT”) is acting as an agent of the Federal Highway Administration in the design and construction of the PROJECT; and

WHEREAS, a portion of the construction cost is to be provided by the Federal Highway Administration and by the Commonwealth of Pennsylvania; and

WHEREAS, the PROJECT construction will require the adjustment, transfer and/or reconstruction of certain of the PWSA’s infrastructure, as described in the Utility Relocation Clearance Report and PennDOT ECMS Special Provision documents, attached as Exhibit A (“Infrastructure”), located 100% in public right of way; and 0% of which are presently located outside the existing public right of way; and,

WHEREAS, any such Infrastructure transferred to or remaining at a location within the right of way of a Federally aided highway will be accommodated in accordance with the provisions of the current 23 Code of Federal Regulations, Part 645, Subpart B, Accommodation of Utilities; and,

WHEREAS, the CITY will include certain work within CITY’s construction contract, to accommodate the relocation or adjustment of the Infrastructure by the CITY’s contractor; and

WHEREAS, the CITY will award the bridge construction to the lowest responsible bidder for the PROJECT, the total cost of which will include direct and indirect costs for work described in Paragraph 1 and Exhibits A and B; and

WHEREAS, CITY has agreed to pay costs for work to be performed by the CITY’s contractor, in order to accommodate the relocation or adjustment of Infrastructure by the CITY’s contractor, as more fully described hereunder, and PWSA has agreed to provide reimbursement of actual expenses in an amount not to exceed Fifteen Thousand Five Hundred Dollars and Zero Cents (\$15,500.00) necessary for the performance of work. Upon completion of the work contemplated by this Agreement, as itemized in Exhibit C, the CITY shall provide to PWSA the final invoice for such reimbursement.

WHEREAS, this agreement outlines the respective duties and entitlements of both the CITY and the PWSA.

NOW THEREFORE, in consideration of the mutual promises and intending to be legally bound, the parties agree as follows:

1. **SCOPE OF SERVICES:** The parties will adjust, transfer, relocate, and/or reconstruct certain Infrastructure within the public right-of-way, as further described and defined in the attached Exhibit A. All Incorporated Work (as defined in Exhibit A) will be performed by CITY, through contract. All work will be performed in accordance with PennDOT and PWSA standards and specifications that are part of the CITY’s construction contract. Any proposed changes to the PROJECT’s Incorporated Work as defined in Exhibit A must be mutually agreed upon and follow applicable PennDOT project scope change procedures. The contract plans relating to PWSA facilities are attached and made part of this agreement as Exhibit B.

2. **MAINTENANCE:** Upon CITY’s completion of the installation of the Infrastructure in accordance with the standards and specifications as set forth in this Agreement, PWSA, at its sole cost and expense, shall be responsible for the maintenance and operation of the Infrastructure.

3. **TERM OF AGREEMENT:** Subject to applicable provisions of the Pennsylvania Public Utility Code, the term of this Agreement will commence on the earliest date allowed under the applicable law and will continue until the work described herein is complete.

4. **TERMINATION OF AGREEMENT:**

- a. CITY may terminate this Agreement if PWSA fails to perform any of the terms, conditions or provisions of this Agreement or due to cancellation of the PROJECT as set forth in Section 5 by delivery of notice to PWSA. Such termination shall become effective upon the expiration of fifteen (15) calendar days following delivery of notice to PWSA or such later date designated by the notice.
- b. PWSA may terminate this Agreement upon CITY's breach of any of the terms of, or its obligations under, this Agreement if such breach continues without cure for a period of thirty (30) days after written notification from PWSA to CITY of such breach.
- c. This Agreement may be terminated at any time by written mutual agreement between the parties.
- d. If the Agreement is terminated by PWSA pursuant to this Section, the parties understand that it may be impractical and/or unsafe to immediately stop the Incorporated Work. In such instance the CITY may continue to perform the Incorporated Work until it has reached a point where it may reasonably and/or safely suspend the Incorporated Work. PWSA shall reimburse CITY pursuant to this Agreement for all Incorporated Work completed at the time of suspension.

5. **CANCELLATION OF PROJECT:** If for any reason, the PROJECT referred to herein should be cancelled, abandoned, or revised in such a manner that the work described in Paragraph 1 of this Agreement should no longer be required, then PWSA shall be responsible only for reimbursement of the work actually completed at the time of notification, per Section 4.a., by the CITY of said cancellation, abandonment, or revision.

6. **MODIFICATION OR AMENDMENT:** This Agreement contains all terms and conditions agreed upon by the parties hereto, and no other agreement, oral or otherwise, regarding the subject matter of this Agreement, will be deemed to exist or to bind any of the parties hereto. Also, this Agreement may not be changed, modified, discharged or extended except by written amendment, duly executed by the parties.

7. **ASSIGNMENT:** PWSA may not assign, subcontract or otherwise delegate its duties under this Agreement except as permitted by this Agreement or as may be consented, in writing, by the CITY.

8. **NOTICES:** All notices required to be given pursuant to the terms and provisions of this Agreement shall be in writing, sent by certified mail, return receipt requested, prepaid, and shall be addressed as follows:

TO CITY:

City of Pittsburgh Department of Mobility and Infrastructure
301 City-County Building
414 Grant Street
Pittsburgh, PA 15219
ATTENTION: Kim Lucas, Director

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement on the day and year first above written.

THE PITTSBURGH WATER AND SEWER AUTHORITY

DocuSigned by:
William J. Pickering
By: _____
Name: William J. Pickering
Title: Chief Executive Officer
Date: 12/13/2023

DocuSigned by:
Edward Barca
Edward Barca, Director of Finance for PWSA

Approved as to Form:

DocuSigned by:
Megan Thiessen
Legal Counsel for PWSA

CITY OF PITTSBURGH

DocuSigned by:
Ed Gainey

Mayor

DocuSigned by:
Jeff Skalican

Director, Department of Mobility and Infrastructure

EXAMINED BY: _____
DocuSigned by:
Forrest Paul
Assistant City Solicitor

APPROVED AS TO FORM: _____
DocuSigned by:
Krycia Kubiak
City Solicitor

COUNTERSIGNED: _____
DocuSigned by:
Michael E. Lamb
City Controller

EXHIBIT A

**Utility Clearance Report
Special Provision Documents**

D-4181-UC (9-14)



pennsylvania
DEPARTMENT OF TRANSPORTATION

**UTILITY RELOCATION
CLEARANCE REPORT
INSTRUCTIONS**

- State Route – Identify the state route for the proposed facilities.
- Station to Station or Segment & Offset to Segment & Offset – Identify the location of the proposed facilities.
- RT/LT – Identify if the proposed facilities are right or left of the highway centerline.
- Brief Description of the Adjustment – Identify the type of work required for the relocation/adjustment (i.e., install new pole, relocate gas line, etc.).
- Type of Relocation - Each Location – Identify the type of relocation for each location. See the definitions for the different types of relocations on the form.
- Describe Conditional Restrictions or Time Requirements for Coordinated Work – Identify any conditional restrictions or time requirements for the utility work, including sequencing of utility work. See the definitions for the different types of relocations on the form.
- Calendar Days Required or Date of Completion – Identify how many calendar days are required to complete the work for each location. For PRIOR work, give the anticipated or actual completion date.
 - If applicable, the utilities should also include time to order material, the sequencing of operations between utilities and scheduling crews and outages.
- Sign and Date the form.
- If needed, attach additional sheets to list additional information.



UTILITY RELOCATION CLEARANCE REPORT

COUNTY Allegheny
 CITY, BORO, TWP City of Pittsburgh
 ROUTE & SECTION Blvd. of Allies/Dawson/Parkview
 FEDERAL PROJ NO _____

Appendix A

Utility Pittsburgh Water and Sewer Authority
 Date 10/25/23
 Prepared by Ben Grunauer
 Phone 570-269-7130
 Construction Contact Ben Grunauer
 Phone 570-269-7130

TYPE OF RELOCATION WORK (REF: DESIGN MANUAL PART 5)

- 1 **PRIOR:** Anticipated completion of work before the highway contractor's Notice to Proceed is issued. Use actual or anticipated completion date.
- 2 **RESTRICTIVE:** To be completed by the UTILITY before highway contractor can operate without restriction. Number of calendar days required AFTER THE DATE OF NOTICE TO PROCEED AND AFTER CONTRACTOR NOTIFIES UTILITIES.
- 3 **CONCURRENT:** Simultaneous with, but not restricting the contractor's operation. Number of calendar days required.
- 4 **COORDINATED:** Phasing with a specific construction operations. Number of calendar days required AFTER COMPLETION OF SPECIFIC CONSTRUCTION OPERATIONS (e.g.: clearing & grubbing, rough grading, pipe hangers).
- 5 **NOT AFFECTED:** Identifies UTILITY with facilities in the construction area not anticipated to be affected. Specific information may be provided by the UTILITY.
- 6 **INCORPORATED:** Utility relocation work to be incorporated into the prime highway construction contract.

CONDITIONAL RESTRICTIONS AND TIME REQUIREMENTS: Identify conditions affecting the utility's ability to perform work, i.e. certain times of the day, week or year that a facility cannot shutdown, acquisition of R/W by the State, demolition of buildings, relocation of other utilities, etc. Show number of calendar days.

LIST EACH AREA OF INVOLVEMENT BELOW

ROUTE	STATION TO STATION OR SEG. & OFFSET TO SEG. & OFFSET	RT./LT.	BRIEF DESCRIPTION OF ADJUSTMENT	TYPE OF RELOCATION EACH AREA (SEE ABOVE)	DESCRIBE CONDITIONAL RESTRICTIONS OR TIME REQUIREMENTS SPECIFY CONTRACTOR'S OPERATION FOR COORDINATED WORK. SEE NOTES ABOVE	CALENDAR DAYS REQ'D OR DATE OF COMPLETION
Parkview	100+58	Lt	Grade adjust/replace (1) manhole frame & cover	6	Coordinate inspection w/ PWSA 14 days in advance of work	
Parkview	100+40 to 100+65	L/Rt	Grade adjust (3) water valve boxes	6	Coordinate inspection and material pick-up w/ PWSA 30 days in advance of work	
Parkview	200+95 to 201+10	L/Rt	Grade adjust (6) water valve boxes	6	Coordinate inspection and material pick-up w/ PWSA 30 days in advance of work	
Blvd. Allies	9+25	Lt	Grade adjust (1) water valve box	6	Coordinate inspection and material pick-up w/ PWSA 30 days in advance of work	
Blvd. Allies	9+30 to 9+60	L/Rt	Rebuild (2) water valve boxes	6	Coordinate inspection and material pick-up w/ PWSA 30 days in advance of work	
Blve. Allies		L/Rt	Grade adjust/replace (2) manhole frames & covers	6	Coordinate inspection w/ PWSA 14 days in advanc	

The proposed adjustments described above are the necessary relocation adjustments to be undertaken by the above named utility to accommodate the construction of the above listed highway project. Contingent upon the approval of a necessary occupancy permit and/or execution of a reimbursement agreement and upon notice to proceed by the Department of Transportation, the above named utility agrees to proceed with these adjustments.

BY Benjamin Grunauer
 Benjamin Grunauer
 October 25, 2023
 (Signature)

Associate Project Manager
 TITLE

EXHIBIT B
Contract Plans Relating to PWSA Facilities

ITEM NO. 9000-0012- 12" PVC, SDR-26 PIPE
ITEM NO. 9000-0013 - 12" PVC, SDR-26 PIPE FITTINGS

DESCRIPTION -

This work is the installation of 12" PVC, SDR-26 PIPE and 12" PVC, SDR-26 PIPE FITTINGS as shown on the contract drawings, as described herein, as directed in the field, as specified in the current City of Pittsburgh Standards, and as specified in the current Pittsburgh Water and Sewer Authority Standards.

MATERIAL -

As specified in Section 601 and as follows:

Materials provided as part of this item are subject to review and approval by Pittsburgh Water and Sewer Authority prior to installation.

- a. Polyvinylchloride (PVC) pipe to be made and joined with an integral bell, bell-and-spigot rubber gasketed joint. Each integral bell joint to consist of a formed bell complete with a single rubber gasket. Gaskets to conform to ASTM F477 and should meet ASTM D3212 "Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seal". PVC Pipe to comply with ASTM D3034, SDR-26 Pipe and fittings to meet or exceed all applicable requirements of ASTM D3034, SDR-26, and ASTM D-1784. The pipe stiffness to be as specified in ASTM designation D2412 Specification for External Loading Properties of Plastic Pipe by Parallel Plate Loading.
- b. Backfill material (from top of pipe envelope to subgrade elevation) to be crushed stone or gravel aggregate conforming to Select Granular Material (2A) as specified in Section 703.3, PennDOT Publication 408 Specifications.
- c. Bedding Material to be AASHTO No. 67 aggregate crushed stone or gravel aggregate as specified in Table C, Section 703.2, PennDOT Publication 408 Specifications. Materials not acceptable as bedding include sharp edged aggregate, earth, wet granulated slag, and open hearth slag.
- d. PVC to Concrete Couplings to conform to ASTM C-923. For PVC pipe to concrete pipe, use insertion type tee connection or an approved equal.
- e. Flexible Elastomeric Seals: ASTM D3212 Seal Material: ASTM F477.
- f. Approved preformed caps (stoppers) are to be used at the ends of all laterals.
- g. City Class P Concrete as specified in the City of Pittsburgh Specifications titled, "Specifications for Concrete Pavement and Base Course", revised March, 1978, ASTM A615, and any supplements thereto.

CONSTRUCTION -

As specified in Section 601 and as follows:

All work performed under this item is subject to inspection by the Pittsburgh Water and Sewer Authority or their authorized representative.

This work should be done as specified in the details shown on the contract drawings and as specified in The Pittsburgh Water and Sewer Authority Specifications and The City of Pittsburgh Specifications, 1938, Section 545, Sewer Construction. The Contractor should install all pipe in adherence to ASTM 02321, "Standard Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe and Uni-Bell Specification UNI-B-5, "Recommended Practice for the Installation of Polyvinyl Chloride (PVC) Sewer Pipe. The pipe should be made and joined with an integral bell, bell-and-spigot rubber gasketed joint. Each integral bell joint should consist of a formed bell complete with a single rubber gasket. Gaskets should conform to ASTM F477 and should meet ASTM D3212 "Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seal".

All sewer pipe to be installed to the lines and grades shown on the Contract Drawings, or as directed by the Engineer. The grade shown on the profile is that of the invert of the pipe. Work not in compliance with these grades will be rejected and will be corrected by the Contractor at his/her own expense in a manner acceptable to the Owner. Any defective pipe or fitting found in the line is to be removed and replaced without cost to the Owner. When completed, the pipes should form a continuous and uniform line without projections, indentations, offsets or irregularities of any kind. Installed pipe to rest flat and straight on the bedding at all locations without bridging or binding. Backfill to be carefully placed to avoid damage to the pipe and also be placed to the grades shown on Contract Drawings. The pipe should not be driven down to grade by striking it with a shovel handle, timber, rammer, or other unyielding object. When each pipe has been properly bedded, enough of the backfill material should be placed and compacted between the pipe and the sides of the trench to hold the pipe in correct alignment. The grade and alignment of the pipe should be maintained by the use of laser beams or other methods acceptable to the Director. The Contractor will furnish all labor, material, and surveying instruments and tools to establish and maintain all lines and grades from the control points furnished by the Director.

Trench excavation to be in strict conformance with OSHA Regulations regarding the selection of shoring systems (sloping and benching systems, and/or support, shield or other systems). A registered Professional Engineer's certified design calculations will be required for protective systems where trench depth is greater than 20 feet, as specified in Paragraphs 1926.652 (b) and (c) of the Regulations. In addition, a Professional Engineer's certification and usage specification for trench shoring/shielding systems or sloping of trenches will be required where the trench depth is 20 feet or less as specified in Subpart B of the Regulations. The Professional Engineer must be registered in the Commonwealth of Pennsylvania.

Following the trench preparation, pipe laying to proceed upgrade with the pipe laid carefully, hubs up-grade and spigot ends fully inserted into adjacent hubs. Each section of pipe to rest upon the pipe bed for the full length of its barrel with recesses excavated to accommodate bells and joints. Each pipe to be firmly held in position so that the

invert forms a continuous grade with the invert of the pipe previously placed and true to the lines and grade staked. Walking or working on the completed pipe line, except as may be necessary in backfilling or tamping, will not be permitted until the trench has been backfilled to a height of at least two feet over the top of the pipes. Blocking will not be permitted except where the pipe is to be encased in concrete. Any pipe that has its grades or joints disturbed after laying to be removed and re-laid. The interior and ends of all pipes to be thoroughly cleaned during laying operations by means of plugs or other approved methods. Under no circumstances should pipe be laid in water and no pipe should be laid when trench conditions or the weather is unsuitable for such work except by permission of the Engineer. In all cases, water should be kept out of the trench until the concrete encasement or cradle, where used, has hardened or until the pipe sidefills have been placed. Every precaution necessary should be taken to obtain watertight construction. If deemed necessary, sewer lines will be tested for leakage between manholes as the work progresses.

All pipes are to be joined in strict conformance with the manufacturer's written specifications so that all joints will be watertight.

Each section of pipe should be cleaned and inspected before joining. Assembly should provide tight, flexible joints that permit movement caused by expansion, contraction, and ground movement. Lubricant recommended by the pipe or fitting manufacturer should be used for making joints. If unusual joining resistance is encountered or if the pipe cannot be fully inserted into the bell, the Contractor should disassemble the joint, inspect it for damage, reclean or replace the joint components, and reassemble the joint.

At all times when sanitary sewer and surface drain piping installation is not actually in progress, the open ends in place of piping should be closed by temporary plugs or by other approved means. If water is in the trench when work is resumed, the plug should not be removed until all danger of earth or other materials from entering the pipe has passed.

The connection to the existing sewers should be protected in such a manner to prevent water, dirt or debris from entering the existing system at any time during construction. Costs for connection to existing sewer should be included in the unit price bid for sewer pipe.

The Contractor should take all necessary precautions to prevent flotation of the pipe from trench flooding. At all times when pipe laying is not actually in progress, the open ends of pipe should be closed by temporary watertight plugs or by other approved means. If water is in the trench when work is resumed, the plug should not be removed until all danger of water entering the pipe has passed.

Where indicated on the Contract Drawings or required by the Owner, piping should be placed on a concrete cradle, or concrete should be placed around pipes for anchors, bedding and encasement. Concrete anchors or cradles should consist of structures composed of concrete built-in trenches to support pipes and to the dimensions shown on the Contract Drawings, or Standard Detail, or as furnished by the Owner. Concrete bedding and encasement should be composed of concrete placed in trenches without forms as pipe bedding, or encased around pipes, to the dimensions and in the locations designated by the Owner or indicated on the Contract Drawings.

The Contractor should build drop connections as shown on the Contract Drawings, or where the drop in the invert is 2.0 feet or more or as directed by the Director, and in conformity with the Contract Drawings.

The Contractor should supply the appropriate size wyes for all lateral connections and reconnections and/or core each lateral to correct size. In general, connections to main sanitary sewers will be made with commercially manufactured wye branches and one-eighth bends. Standard fittings of the same material and joint type as the pipeline into which they are installed must be used. Cutting of pipe will not be permitted except in special cases approved by the Engineer. Unless otherwise directed by the Engineer, wye branches will be installed as shown in the Standard Details with the branch turned approximately 45 degrees from the horizontal. The termination elevation of all service connections will generally be determined by the elevation of the service sewer to be connected.

If a transition in sewer lateral pipe must be made during the reconnection of service connections, an approved flexible type coupling or donut, and sealers must be as manufactured by Fernco, Inc., or an approved equal. Costs for furnishing and installing the couplings and sealers should be included in the sewer lateral unit price bid.

Wye branches should be installed at the locations indicated on the Contract Drawings. Service connections should be laid and joined in every respect in the same manner specified for installation of pipe and fittings. All service sewer connections should have a hub end and closed with pipe caps as specified. The ends of all service connection trenches should not be backfilled until the elevation and location of the service connection has been inspected and approved by the Director. The Contractor should further provide location of each service connection with a two-inch by two-inch hardwood stake extending from the connection to 1 foot above the finished ground elevation.

If rock is encountered in a house connection within 25 feet of any building, it must be removed by drilling and wedging or some other approved method than blasting. Rock in service connection trenches should be removed to a point not less than five feet beyond the end of the pipe installation.

Where the depth of the main pipeline warrants, riser type laterals should be constructed from the wye branch. When tapping into an existing pipeline, the Contractor should use a saddle wye or tee with stainless steel clamps or core drill the pipe and install a watertight resilient boot. Mount saddles should then be sealed with a solvent cement or gasket and then secured with metal bands. Holes should be laid out with a template and then cut with a mechanical hole cutter.

PVC to Concrete connections (i.e., manholes) should be watertight. The Contractor should use elastomeric water stops or gaskets to couple all PVC pipe to concrete structures. Installation of couplings should conform to the applicable sections of ASTM C-923.

Testing should be done as specified in the testing procedures most recently adopted by the Pittsburgh Water and Sewer Authority or ASTM C-828, as directed by PWSA. Refer to special requirements.

Excavate, existing street pavement and trench, prepare trenches, bedding and backfill according to the Pittsburgh Water and Sewer Authority standards and as shown on the contract drawings.

Backfill sewer trench under the roadways and future roadways with approved material, hand compacted in 6" lifts and other than under roadways with approve embankment materials, hand compacted in 6" lifts.

Any additional excavation required by OSHA regulations and additional backfill material beyond the pipe trench will be considered incidental to the appropriate pipe item and there will be no additional payment for this work.

The Contractor should connect to proposed laterals (by others) or cap the end for future connection (by others). All material and labor are incidental to or PVC, SDR-26 pipe items.

The free end of all service lines, whether it be the end of a wye, bend or straight piece, should be provided with a cap of the same material of the pipe and having a joint of the same type as that on the pipe and pipe fittings, such that the cap will be securely placed and the connection between the pipe and the cap will be watertight. The stopper should be installed with the last section of service pipe or fitting placed.

The Contractor should provide concrete cradles and encasement for piping where indicated on the Contract Drawings, Work Orders, or as directed by the Director, and as specified in the Standard Detail.

While backfilling the terminus of unconnected PVC laterals, the Contractor should install six-inch wide green polyethylene film with the message "Caution Sewer Line Buried Below" clearly marked on the film. The polyethylene film for each terminus location should be buried longitudinally a minimum of six (6) feet in length and at a depth of four (4) feet below the surface and extending to the surface. A wooden hub (2"x4"), painted green for sanitary sewers and orange for storm sewers, should be driven into the ground at the terminus location and the exposed end of the film should be tied to the hub. Also place a 36" No.8 steel rebar at the same location, flush with grade.

In the area where the pavement is to be replaced, construct item prior to the placement of pavement, sidewalk, or curb.

Maintain record drawings documenting the line and grade of all installed facilities, including lengths, inverts, fitting locations, etc.

Incidental to this item are routine test pits and probing as required for proposed connections to existing subsurface facilities or other facilities properly marked through the PA One Call System that will be encountered within or adjacent to the proposed excavation zone for pipes, fittings, manholes or other related work.

MEASUREMENT AND PAYMENT -

ITEM 9000-0012 - 12" PVC, SDR-26 PIPE. LINEAR FOOT.
ITEM 9000-0013 - 12" PVC, SDR-26 PIPE FITTINGS. EACH.

Measurement for PVC sewer pipe is based on the laying length of pipe installed from centerline of manhole to centerline of manhole minus one-half of the diameter of each manhole. No deductions will be made for wyes. Measurement for PVC sewer laterals is based on the laying length of pipe installed from the trunk line connector (wye or inserted tee).

This item includes, but is not limited to: saw-cutting, removal and disposal of pavement, sidewalks or curbs to the required limits; unclassified excavation to the limits of the trench zone; protection of active utility lines or removal of abandoned utility lines and obstructions in the trench zone; rock excavation; removal, hauling and disposal of all excavated materials; sheeting, shoring, bracing and trench boxes; temporary plating and trench protection; dewatering and pumped water control; furnishing and installation of pipe, gaskets, flexible boot connections, water stops, retainer glands, wyes, fittings; transition couplings, connection to existing sewer pipe; pipe zone bedding; aggregate trench backfill; compaction; marking tape; temporary blocking, supports, caps and plugs; and cleanup and disposal of all debris and surplus materials.

ITEM NO. 9000-0014- 15" PVC, SDR-26 PIPE
ITEM NO. 9000-0015 - 15" PVC, SDR-26 PIPE FITTINGS

DESCRIPTION -

This work is the installation of 15" PVC, SDR-26 PIPE and 15" PVC, SDR-26 PIPE FITTINGS as shown on the contract drawings, as described herein, as directed in the field, as specified in the current City of Pittsburgh Standards, and as specified in the current Pittsburgh Water and Sewer Authority Standards.

MATERIAL -

As specified in Section 601 and as follows:

Materials provided as part of this item are subject to review and approval by Pittsburgh Water and Sewer Authority prior to installation.

- a. Polyvinylchloride (PVC) pipe to be made and joined with an integral bell, bell-and-spigot rubber gasketed joint. Each integral bell joint to consist of a formed bell complete with a single rubber gasket. Gaskets to conform to ASTM F477 and should meet ASTM D3212 "Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seal". PVC Pipe to comply with ASTM D3034, SDR-26 Pipe and fittings to meet or exceed all applicable requirements of ASTM D3034, SDR-26, and ASTM D-1784. The pipe stiffness to be as specified in ASTM designation D2412 Specification for External Loading Properties of Plastic Pipe by Parallel Plate Loading.
- b. Backfill material (from top of pipe envelope to subgrade elevation) to be crushed stone or gravel aggregate conforming to Select Granular Material (2A) as specified in Section 703.3, PennDOT Publication 408 Specifications.
- c. Bedding Material to be AASHTO No. 67 aggregate crushed stone or gravel aggregate as specified in Table C, Section 703.2, PennDOT Publication 408 Specifications. Materials not acceptable as bedding include sharp edged aggregate, earth, wet granulated slag, and open hearth slag.
- d. PVC to Concrete Couplings to conform to ASTM C-923. For PVC pipe to concrete pipe, use insertion type tee connection or an approved equal.
- e. Flexible Elastomeric Seals: ASTM D3212 Seal Material: ASTM F477.
- f. Approved preformed caps (stoppers) are to be used at the ends of all laterals.
- g. City Class P Concrete as specified in the City of Pittsburgh Specifications titled, "Specifications for Concrete Pavement and Base Course", revised March, 1978, ASTM A615, and any supplements thereto.

CONSTRUCTION -

As specified in Section 601 and as follows:

All work performed under this item is subject to inspection by the Pittsburgh Water and Sewer Authority or their authorized representative.

This work should be done as specified in the details shown on the contract drawings and as specified in The Pittsburgh Water and Sewer Authority Specifications and The City of Pittsburgh Specifications, 1938, Section 545, Sewer Construction. The Contractor should install all pipe in adherence to ASTM 02321, "Standard Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe and Uni-Bell Specification UNI-B-5, "Recommended Practice for the Installation of Polyvinyl Chloride (PVC) Sewer Pipe. The pipe should be made and joined with an integral bell, bell-and-spigot rubber gasketed joint. Each integral bell joint should consist of a formed bell complete with a single rubber gasket. Gaskets should conform to ASTM F477 and should meet ASTM D3212 "Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seal".

All sewer pipe to be installed to the lines and grades shown on the Contract Drawings, or as directed by the Engineer. The grade shown on the profile is that of the invert of the pipe. Work not in compliance with these grades will be rejected and will be corrected by the Contractor at his/her own expense in a manner acceptable to the Owner. Any defective pipe or fitting found in the line is to be removed and replaced without cost to the Owner. When completed, the pipes should form a continuous and uniform line without projections, indentations, offsets or irregularities of any kind. Installed pipe to rest flat and straight on the bedding at all locations without bridging or binding. Backfill to be carefully placed to avoid damage to the pipe and also be placed to the grades shown on Contract Drawings. The pipe should not be driven down to grade by striking it with a shovel handle, timber, rammer, or other unyielding object. When each pipe has been properly bedded, enough of the backfill material should be placed and compacted between the pipe and the sides of the trench to hold the pipe in correct alignment. The grade and alignment of the pipe should be maintained by the use of laser beams or other methods acceptable to the Director. The Contractor will furnish all labor, material, and surveying instruments and tools to establish and maintain all lines and grades from the control points furnished by the Director.

Trench excavation to be in strict conformance with OSHA Regulations regarding the selection of shoring systems (sloping and benching systems, and/or support, shield or other systems). A registered Professional Engineer's certified design calculations will be required for protective systems where trench depth is greater than 20 feet, as specified in Paragraphs 1926.652 (b) and (c) of the Regulations. In addition, a Professional Engineer's certification and usage specification for trench shoring/shielding systems or sloping of trenches will be required where the trench depth is 20 feet or less as specified in Subpart B of the Regulations. The Professional Engineer must be registered in the Commonwealth of Pennsylvania.

Following the trench preparation, pipe laying to proceed upgrade with the pipe laid carefully, hubs up-grade and spigot ends fully inserted into adjacent hubs. Each section of pipe to rest upon the pipe bed for the full length of its barrel with recesses excavated to accommodate bells and joints. Each pipe to be firmly held in position so that the

invert forms a continuous grade with the invert of the pipe previously placed and true to the lines and grade staked. Walking or working on the completed pipe line, except as may be necessary in backfilling or tamping, will not be permitted until the trench has been backfilled to a height of at least two feet over the top of the pipes. Blocking will not be permitted except where the pipe is to be encased in concrete. Any pipe that has its grades or joints disturbed after laying to be removed and re-laid. The interior and ends of all pipes to be thoroughly cleaned during laying operations by means of plugs or other approved methods. Under no circumstances should pipe be laid in water and no pipe should be laid when trench conditions or the weather is unsuitable for such work except by permission of the Engineer. In all cases, water should be kept out of the trench until the concrete encasement or cradle, where used, has hardened or until the pipe sidefills have been placed. Every precaution necessary should be taken to obtain watertight construction. If deemed necessary, sewer lines will be tested for leakage between manholes as the work progresses.

All pipes are to be joined in strict conformance with the manufacturer's written specifications so that all joints will be watertight.

Each section of pipe should be cleaned and inspected before joining. Assembly should provide tight, flexible joints that permit movement caused by expansion, contraction, and ground movement. Lubricant recommended by the pipe or fitting manufacturer should be used for making joints. If unusual joining resistance is encountered or if the pipe cannot be fully inserted into the bell, the Contractor should disassemble the joint, inspect it for damage, reclean or replace the joint components, and reassemble the joint.

At all times when sanitary sewer and surface drain piping installation is not actually in progress, the open ends in place of piping should be closed by temporary plugs or by other approved means. If water is in the trench when work is resumed, the plug should not be removed until all danger of earth or other materials from entering the pipe has passed.

The connection to the existing sewers should be protected in such a manner to prevent water, dirt or debris from entering the existing system at any time during construction. Costs for connection to existing sewer should be included in the unit price bid for sewer pipe.

The Contractor should take all necessary precautions to prevent flotation of the pipe from trench flooding. At all times when pipe laying is not actually in progress, the open ends of pipe should be closed by temporary watertight plugs or by other approved means. If water is in the trench when work is resumed, the plug should not be removed until all danger of water entering the pipe has passed.

Where indicated on the Contract Drawings or required by the Owner, piping should be placed on a concrete cradle, or concrete should be placed around pipes for anchors, bedding and encasement. Concrete anchors or cradles should consist of structures composed of concrete built-in trenches to support pipes and to the dimensions shown on the Contract Drawings, or Standard Detail, or as furnished by the Owner. Concrete bedding and encasement should be composed of concrete placed in trenches without forms as pipe bedding, or encased around pipes, to the dimensions and in the locations designated by the Owner or indicated on the Contract Drawings.

The Contractor should build drop connections as shown on the Contract Drawings, or where the drop in the invert is 2.0 feet or more or as directed by the Director, and in conformity with the Contract Drawings.

The Contractor should supply the appropriate size wyes for all lateral connections and reconnections and/or core each lateral to correct size. In general, connections to main sanitary sewers will be made with commercially manufactured wye branches and one-eighth bends. Standard fittings of the same material and joint type as the pipeline into which they are installed must be used. Cutting of pipe will not be permitted except in special cases approved by the Engineer. Unless otherwise directed by the Engineer, wye branches will be installed as shown in the Standard Details with the branch turned approximately 45 degrees from the horizontal. The termination elevation of all service connections will generally be determined by the elevation of the service sewer to be connected.

If a transition in sewer lateral pipe must be made during the reconnection of service connections, an approved flexible type coupling or donut, and sealers must be as manufactured by Fernco, Inc., or an approved equal. Costs for furnishing and installing the couplings and sealers should be included in the sewer lateral unit price bid.

Wye branches should be installed at the locations indicated on the Contract Drawings. Service connections should be laid and joined in every respect in the same manner specified for installation of pipe and fittings. All service sewer connections should have a hub end and closed with pipe caps as specified. The ends of all service connection trenches should not be backfilled until the elevation and location of the service connection has been inspected and approved by the Director. The Contractor should further provide location of each service connection with a two-inch by two-inch hardwood stake extending from the connection to 1 foot above the finished ground elevation.

If rock is encountered in a house connection within 25 feet of any building, it must be removed by drilling and wedging or some other approved method than blasting. Rock in service connection trenches should be removed to a point not less than five feet beyond the end of the pipe installation.

Where the depth of the main pipeline warrants, riser type laterals should be constructed from the wye branch. When tapping into an existing pipeline, the Contractor should use a saddle wye or tee with stainless steel clamps or core drill the pipe and install a watertight resilient boot. Mount saddles should then be sealed with a solvent cement or gasket and then secured with metal bands. Holes should be laid out with a template and then cut with a mechanical hole cutter.

PVC to Concrete connections (i.e., manholes) should be watertight. The Contractor should use elastomeric water stops or gaskets to couple all PVC pipe to concrete structures. Installation of couplings should conform to the applicable sections of ASTM C-923.

Testing should be done as specified in the testing procedures most recently adopted by the Pittsburgh Water and Sewer Authority or ASTM C-828, as directed by PWSA. Refer to special requirements.

Excavate, existing street pavement and trench, prepare trenches, bedding and backfill according to the Pittsburgh Water and Sewer Authority standards and as shown on the contract drawings.

Backfill sewer trench under the roadways and future roadways with approved material, hand compacted in 6" lifts and other than under roadways with approve embankment materials, hand compacted in 6" lifts.

Any additional excavation required by OSHA regulations and additional backfill material beyond the pipe trench will be considered incidental to the appropriate pipe item and there will be no additional payment for this work.

The Contractor should connect to proposed laterals (by others) or cap the end for future connection (by others). All material and labor are incidental to or PVC, SDR-26 pipe items.

The free end of all service lines, whether it be the end of a wye, bend or straight piece, should be provided with a cap of the same material of the pipe and having a joint of the same type as that on the pipe and pipe fittings, such that the cap will be securely placed and the connection between the pipe and the cap will be watertight. The stopper should be installed with the last section of service pipe or fitting placed.

The Contractor should provide concrete cradles and encasement for piping where indicated on the Contract Drawings, Work Orders, or as directed by the Director, and as specified in the Standard Detail.

While backfilling the terminus of unconnected PVC laterals, the Contractor should install six-inch wide green polyethylene film with the message "Caution Sewer Line Buried Below" clearly marked on the film. The polyethylene film for each terminus location should be buried longitudinally a minimum of six (6) feet in length and at a depth of four (4) feet below the surface and extending to the surface. A wooden hub (2"x4"), painted green for sanitary sewers and orange for storm sewers, should be driven into the ground at the terminus location and the exposed end of the film should be tied to the hub. Also place a 36" No.8 steel rebar at the same location, flush with grade.

In the area where the pavement is to be replaced, construct item prior to the placement of pavement, sidewalk, or curb.

Maintain record drawings documenting the line and grade of all installed facilities, including lengths, inverts, fitting locations, etc.

Incidental to this item are routine test pits and probing as required for proposed connections to existing subsurface facilities or other facilities properly marked through the PA One Call System that will be encountered within or adjacent to the proposed excavation zone for pipes, fittings, manholes or other related work.

MEASUREMENT AND PAYMENT -

ITEM 9000-0014 - 15" PVC, SDR-26 PIPE. LINEAR FOOT.
ITEM 9000-0015 - 15" PVC, SDR-26 PIPE FITTINGS. EACH.

Measurement for PVC sewer pipe is based on the laying length of pipe installed from centerline of manhole to centerline of manhole minus one-half of the diameter of each manhole. No deductions will be made for wyes. Measurement for PVC sewer laterals is based on the laying length of pipe installed from the trunk line connector (wye or inserted tee).

This item includes, but is not limited to: saw-cutting, removal and disposal of pavement, sidewalks or curbs to the required limits; unclassified excavation to the limits of the trench zone; protection of active utility lines or removal of abandoned utility lines and obstructions in the trench zone; rock excavation; removal, hauling and disposal of all excavated materials; sheeting, shoring, bracing and trench boxes; temporary plating and trench protection; dewatering and pumped water control; furnishing and installation of pipe, gaskets, flexible boot connections, water stops, retainer glands, wyes, fittings; transition couplings, connection to existing sewer pipe; pipe zone bedding; aggregate trench backfill; compaction; marking tape; temporary blocking, supports, caps and plugs; and cleanup and disposal of all debris and surplus materials.

GRADE ADJUSTMENT OF MUNICIPALITY'S OR AUTHORITY'S EXISTING MANHOLES, ADJUSTMENT ONLY

In accordance with Section 606 except as follows:

Section 606.2 MATERIAL - Revise by adding the following:

(d) Supplied Material. Manhole extension materials may be provided by the local municipality, water or sanitary authority, or utility company. Three weeks before performing any adjustments, contact the facility owner to make arrangements for the delivery of the materials and notify the Representative that arrangements were made.

Section 606.4 MEASUREMENT AND PAYMENT - Revise to read:

Each. For adjustment only. Install either the provided material supplied by the facility owner or if the facility owner cannot supply the material, then the material will be paid for separately under Item 9000-0016.

Due to the contingent or unpredictable nature of the work being performed, the provisions of Section 110.02(d) are not applicable to this item.

GRADE ADJUSTMENT OF MUNICIPALITY'S OR AUTHORITY'S EXISTING MANHOLES, MATERIAL ONLY

In accordance with Section 606 except as follows:

Section 606.2 MATERIAL - Revise by adding the following:

Manhole extension materials may be provided by the local municipality, water or sanitary authority, or utility company. Contact the facility owner as specified under Item 9000-6063 prior to ordering the material. Purchase all required material not provided by the facility owner, as directed.

Section 606.4 MEASUREMENT AND PAYMENT - Revise to read:

Set. For material only. Installation will be paid for separately under Item 9000-0015.

Due to the contingent or unpredictable nature of the work being performed, the provisions of Section 110.02(d) are not applicable to this item.

ITEM NO. 9000-0020 – CONNECTIONS CORED INTO SEWER STRUCTURE

DESCRIPTION -

This work is the furnishing of all labor, materials, and equipment necessary for CONNECTIONS CORED INTO SEWER STRUCTURES, as indicated, and as shown on the contract drawings, as described herein, as directed in the field, in accordance with current City of Pittsburgh Standards, and in accordance with current Pittsburgh Water and Sewer Authority Standards.

MATERIAL -

In accordance with Section 605 and as follows:

Materials provided as part of this item are subject to review and approval by Pittsburgh Water and Sewer Authority prior to installation.

Approved pipe with approved connection.

Approved water stop required, if flexible plastic pipe is permitted.

Approved non-shrink grout.

CONSTRUCTION –

In accordance with Section 605 and as follows:

All work performed under this item is subject to inspection by the Pittsburgh Water and Sewer Authority or their authorized representative.

Core drill neat into existing manhole/pipe sewer no greater than 30% of the manhole/pipe sewer diameter. No part of the proposed work shall extend past the inside face of the existing manhole/pipe sewer. (Direct connection of a sewer lateral to a PWSA manhole is not permitted)

When tapping existing manholes, caution should be taken not to impact manhole steps.

Invert elevation is determined by the intersection of the slope of the proposed pipe with the centerline of the existing pipe sewer.

Core drill holes to the required size as indicated. Flush the hole with clean water or oil free compressed air to remove cuttings and debris.

Place pipe through the cored hole. Seal around the pipe with a non-shrink grout.

Any damages to the existing manhole due to core drilling should be corrected at no cost to PWSA.

MEASUREMENT AND PAYMENT -

ITEM 9000-0020 CONNECTIONS CORED INTO SEWER STRUCTURE. EACH.

Furnish all labor, materials, tools, and equipment for CONNECTIONS CORED INTO SEWER STRUCTURE as indicated. This item includes, but is not limited to: saw-cutting, removal and disposal of pavement, sidewalks or curbs to the required limits; unclassified excavation; protection of active utility lines or removal of abandoned utility lines and obstructions; normal rock excavation; removal, hauling and disposal of all excavated materials; sheeting, shoring, bracing and trench boxes; temporary plating and excavation protection; dewatering and pumped water control; sewer bypass pumping; furnishing and installing rebar, forming, steps, cleaning castings, concrete, brick, and masonry; connecting existing or proposed sewers to manhole; water stops and gaskets; aggregate backfill and compaction; grade adjustments due to the construction phasing; concrete curing; coal-tar pitch, temporary blocking, supports, caps and plugs; and cleanup and disposal of all debris and surplus materials.

ITEM NO. 9000-0022 – REBUILD PWSA CATCH BASIN (INCLUDES FRAME AND GRATE)

DESCRIPTION -

This work is the rebuilding of existing PWSA Catch Basins to account for changes in elevation from the existing to proposed grade and includes a new PWSA Type 13 Frame and Grate.

MATERIAL -

Materials provided as part of this item are subject to review and approval by Pittsburgh Water and Sewer Authority prior to installation.

Section 605.2, add the following:

Cement Concrete. In accordance with the City of Pittsburgh Specification titled, "Specifications for Concrete Pavement and Base Course, revised March 1978." Construct the base and walls of the catch basin with City Class PP Concrete. Construct hoods with City Class "P" Concrete. Hoods are to be cast-in-place and will no longer have the 5" throat formed into them.

Brick Masonry (optional). In accordance with the City of Pittsburgh Specifications, Section 169, titled, "Sewer and Manhole ASTM C32," except as otherwise stipulated in the Supplements to the Pittsburgh Water and Sewer Authority Specifications.

Cast iron grate shall be in accordance with PWSA standard detail "IFG" and have seventy-two (72) rectangular openings measuring 2-1/4" x 4". Grate shall be imprinted with two trout logos with corresponding lettering, 1/2" high, "DUMP NO WASTE DRAINS TO WATERWAY". Grate shall be listed as "bicycle safe" by the manufacturer.

Cast iron frame shall be 3 sided, suitable for installation against a concrete deep curb. Frame and grate shall have two coats of coal-tar pitch applied and be of certified domestic manufacture.

Mortar. Conforming to the City of Pittsburgh Specifications, Section 544, titled, "Portland Cement Mortar."

Reinforcing Steel. ASTM A615, GR60, domestic manufacture.

CONSTRUCTION -

All work performed under this item is subject to inspection by the Pittsburgh Water and Sewer Authority or their authorized representative. Rebuild catch basin top in accordance with PWSA standard detail "CB13". Install new frame and grate, set to the proper line and grade as shown on the contract drawings. Substitute brick masonry for the reinforced concrete as the construction material for the walls if/as desired. Submit a request, in writing, to PWSA for approval to substitute materials.

Also comply to Section 607.3 as applicable

MEASUREMENT AND PAYMENT -

ITEM 9000-0022 REBUILD PWSA CATCH BASIN (INCLUDES FRAME AND GRATE).
EACH.

Furnish all labor, materials, tools, and equipment to REBUILD PWSA CATCH BASIN (INCLUDES FRAME AND GRATE) as indicated. This item includes, but is not limited to: saw-cutting, removal and disposal of pavement, sidewalks or curbs to the required limits; unclassified excavation; protection of active utility lines or removal of abandoned utility lines and obstructions; normal rock excavation; removal, hauling and disposal of all excavated materials; sheeting, shoring, bracing and trench boxes; temporary plating and excavation protection; dewatering and pumped water control; sewer bypass pumping; furnishing and installing rebar, forming, steps, cleaning castings, grate, frame, cover, concrete, brick, and masonry; connecting existing or proposed sewers to manhole; water stops and gaskets; aggregate backfill and compaction; grade adjustments due to the construction phasing; concrete curing; coal-tar pitch, temporary blocking, supports, caps and plugs; and cleanup and disposal of all debris and surplus materials.

ITEM NO. 9000-0024 - PWSA STORM INLET TYPE 13 3-FLANGE FRAME
ITEM NO. 9000-0025 - PWSA CATCH BASIN TYPE 13 3-FLANGE FRAME

DESCRIPTION -

This work is the furnishing of all labor, materials, and equipment necessary to complete the installation of a PWSA CATCH BASIN TYPE 13 3-FLANGE FRAME, PWSA STORM INLET TYPE 13 3-FLANGE FRAME, or PWSA CATCH BASIN TYPE 13 MODIFIED as shown on the contract drawings, as described herein, as directed in the field, in accordance with PennDOT 408, current edition, Section 605, and in accordance with current Pittsburgh Water and Sewer Authority (PWSA) Standards.

MATERIAL -

Materials provided as part of this item are subject to review and approval by Pittsburgh Water and Sewer Authority prior to installation.

Section 605.2, add the following:

Cement Concrete. In accordance with the City of Pittsburgh Specification titled, "Specifications for Concrete Pavement and Base Course, revised March 1978." Construct the base and walls of the catch basin with City Class PP Concrete. Construct hoods with City Class "P" Concrete. Hoods are to be cast-in-place and will no longer have the 5" throat formed into them.

Brick Masonry (optional). In accordance with the City of Pittsburgh Specifications, Section 169, titled, "Sewer and Manhole ASTM C32," except as otherwise stipulated in the Supplements to the Pittsburgh Water and Sewer Authority Specifications.

Cast iron grate shall be in accordance with PWSA standard detail "IFG" and have seventy-two (72) rectangular openings measuring 2-1/4" x 4". Grate shall be imprinted with two trout logos with corresponding lettering, 1/2" high, "DUMP NO WASTE DRAINS TO WATERWAY". Grate shall be listed as "bicycle safe" by the manufacturer.

Cast iron frame shall be 3 sided, suitable for installation against a concrete deep curb. Frame and grate shall have two coats of coal-tar pitch applied and be of certified domestic manufacture.

Manhole Steps, conforming to the Pittsburgh Water and Sewer Authority Standards Drawing No. A2h (see Appendix D), which details plastic-coated steel reinforced steps.

Mortar. Conforming to the City of Pittsburgh Specifications, Section 544, titled, "Portland Cement Mortar."

Reinforcing Steel. ASTM A615, GR60, domestic manufacture.

CONSTRUCTION -

All work performed under this item is subject to inspection by the Pittsburgh Water and Sewer Authority or their authorized representative.

Section 605.3, add the following:

Excavate one (1) foot beyond the side dimensions shown at the locations indicated.

Form the base and walls of the catch basin or storm inlet, both inside and outside, and provide reinforcement to meet the specifications and dimensions shown on the Pittsburgh Water and Sewer Authority and City of Pittsburgh Standards.

Construct catch basins or storm inlets in accordance with City of Pittsburgh Specifications, Section 529, and set to the proper line and grade as shown on the Contract Drawings.

Catch basins or storm inlets that are over seven (7) feet deep will require installing plastic-coated steel steps at no additional cost.

The Contractor may elect to substitute brick masonry for the reinforced concrete as the construction material for the walls. Submit a request, in writing, to PWSA for approval to substitute materials.

If abandoned utility lines are within excavated trench, remove at no additional payment.

MEASUREMENT AND PAYMENT -

ITEM 9000-0024 - PWSA STORM INLET TYPE 13 3-FLANGE FRAME. EACH.
ITEM 9000-0025, PWSA CATCH BASIN TYPE 13 3-FLANGE FRAME EACH.
ITEM 9000-0026, PWSA CATCH BASIN TYPE 1 MODIFIED (OVER EXISTING UTILITY). EACH.

Furnish all labor, materials, tools, and equipment to install CATCH BASIN TYPE 13 3-FLANGE FRAME, STORM INLET TYPE 13 3-FLANGE FRAME or CATCH BASIN TYPE 13 MODIFIED as indicated. This item includes, but is not limited to: saw-cutting, removal and disposal of pavement, sidewalks or curbs to the required limits; unclassified excavation; protection of active utility lines or removal of abandoned utility lines and obstructions; normal rock excavation; removal, hauling and disposal of all excavated materials; sheeting, shoring, bracing and trench boxes; temporary plating and excavation protection; dewatering and pumped water control; sewer bypass pumping; furnishing and installing rebar, forming, steps, cleaning castings, grate, frame, cover, concrete, brick, and masonry; connecting existing or proposed sewers to manhole; water stops and gaskets; aggregate backfill and compaction; grade adjustments due to the construction phasing; concrete curing; coal-tar pitch, temporary blocking, supports, caps and plugs; and cleanup and disposal of all debris and surplus materials.

ITEM NO. 9000-0026 – 48-INCH PRECAST MANHOLE (0' TO 0' DEEP)

DESCRIPTION

This work consists of construction of manholes at the locations indicated, in accordance with the details shown on the current City of Pittsburgh and The Pittsburgh Water and Sewer Authority Standards for Construction and in accordance with these Specifications and ASTM C-478. All material and workmanship are in accordance with the current contract drawings and The City of Pittsburgh and The Pittsburgh Water and Sewer Authority Specifications.

MATERIAL

- A. Precast concrete barrel sections and cone sections shall conform to American Society for Testing and Materials (ASTM) Specification C-478 except as may be otherwise shown on the Standard Details. Also the outside diameter of the top of the conical section that receives the manhole frame shall be 48" with an opening of 27" diameter.
- B. City Class PP Concrete. Conforming to the requirements of the City of Pittsburgh Specifications titled, "Specifications for Concrete Pavement and Base Course," revised March 1978 and any supplements thereto.
- C. Manhole Steps. Conforming to the Pittsburgh Water and Sewer Authority Standard Drawing No. A-2b (attached) which details plastic coated steel reinforced steps.
- D. Brick Masonry (optional). Conforming to ASTM C32 City of Pittsburgh Specifications, Section 169, titled, "Common Masonry Brick," and revisions.
- E. Frame and Lid Castings. Conforming to the Pittsburgh Water and Sewer Authority Standard Casting Numbers 26 and 25V, respectively. Frame and lid casting shall have two coats of coal-tar pitch applied.

Manhole frame and cover shall provide a 29" diameter clear opening. The cover shall have the word "PWSA STORM" in 2" high lettering for storm sewer manholes and "PWSA SEWER" for sanitary sewer manholes. The frames shall be furnished with the flange drilled for two 3/4" anchor bolts.

- F. Mortar. Conforming to the City of Pittsburgh Specifications, Section 544, titled, "Portland Cement Mortar."
- G. Reinforcing Steel. ASTM A615. GR-60
- H. Approved bituminous joint gasket (pre-cast manhole)

CONSTRUCTION

Construct manholes in accordance with the Pittsburgh Water and Sewer Authority Specifications. Supply and set castings to the proper line and grade adjusting with brick and mortar only, as shown on the contract drawings, in such a manner so as to allow for grade adjustments of $\pm 6"$. Also, final casting must be within 3/16" of finished grade. Grade adjust with brick and mortar only. Use precast sections to construct the manholes, in accordance with The Pittsburgh Water and Sewer Authority Standards for Construction, with the following exceptions:

- Bases are cast-in-place using City Class PP Cement Concrete,
- Inverts are constructed per the Pittsburgh Water and Sewer Authority Specifications, Supplemental Drawing Detail No. A-2A entitled "Manhole Invert." Detail.

Manhole depth is measured from lowest invert elevation to final lid elevation.

Reconstructing flow lines of existing manholes is considered incidental to the various sewer items and is to be completed at no additional payment.

PWC pipes entering manhole walls shall have a watertight seal to eliminate leaks. Connect PVC pipes to manhole by elastomeric water stops or gaskets or a method approved by the Pittsburgh Water and Sewer Authority. Do not concrete encase PVC pipe at manhole. Concrete will not adhere to PVC pipe.

Vacuum test of manholes refer to Leakage Test or Optional Leakage Test in the Technical Specifications.

Grade adjustment may be necessary due to the construction phasing of the project. This adjustment will be considered incidental to the manhole items at no additional payment.

MEASUREMENT AND PAYMENT

ITEM NO. 9000-0026 – 48" PRECAST MANHOLE (0' TO `0' DEEP) Each.

Includes all excavation, sheeting, shoring, bracing, pumping, fluming, connecting proposed sewers to manhole, water stops, gaskets, vacuum testing, backfill around completed manholes, compaction, grade adjustments, manhole steps, coal-tar pitch, all labor, material, equipment, tools, castings, concrete, steel reinforcement, and the satisfactory removal and disposal of all unsuitable and surplus material.

ITEM NO. 9000-0029 – REMOVE EXISTING INLET/CATCH BASIN

DESCRIPTION - This work is removal of existing inlet/catch basins.

MATERIAL - Materials provided as part of this item are subject to review and approval by Pittsburgh Water and Sewer Authority prior to installation.

Backfill. Section 703.3, crushed stone or gravel aggregate conforming to gradation #2A.

CONSTRUCTION -

All work performed under this item is subject to inspection by the Pittsburgh Water and Sewer Authority or their authorized representative.

Saw cut existing pavement surrounding structure to be removed. Carefully remove pavement surrounding existing casting to minimize damage. Store salvaged frame/grate on-site and load on City vehicles as directed. Remove remaining buried structure in accordance with Section 204.

Follow OSHA regulations for excavation and provide shoring, sheeting or bracing of trench.

Backfill with approved material, hand compacted in 6" lifts to strict subgrade elevation.

Maintain existing flows by approved methods at all times.

MEASUREMENT AND PAYMENT - Each

Temporary support as per OSHA requirements is considered incidental to this item of work and at no additional payment.

ITEM NO. 9000-0207 GRADE ADJUST AND REPLACE MANHOLE FRAME AND COVER

DESCRIPTON -

This work is to GRADE ADJUST AND REPLACE MANHOLE FRAME AND COVER on existing manhole as shown on the contract drawings, as described herein, as directed in the field, and as specified in the current Pittsburgh Water and Sewer Authority Standards.

MATERIAL -

Materials provided as part of this item are subject to review and approval by Pittsburgh Water and Sewer Authority prior to installation.

- a. Frame and Covers. The standard PWSA frame and covers should be provided.
- b. Manhole frame and cover should provide a 29" diameter clear opening. The cover should have the words "PWSA STORM" in 2" high lettering for storm sewer manholes and "PWSA SEWER" for sanitary and combination sewer manholes. The frames should be furnished with the flange drilled for two 3/4" anchor bolts.
 1. Frame and Lid Castings. Frame and Cover. Frame and cover castings should be of good quality, strong, tough, even-grained cast iron, smooth, free from scale, lumps, blisters, sandholes, and defects of every nature which would render them unfit for the service for which they are intended. Contact surfaces of cover and frame seats should be machined at the foundry, before shipment, to prevent rocking of covers in any orientation. All castings should be thoroughly cleaned and subject to a careful hammer inspection. Castings should be at least Class 30 conforming to ASTM Standard Specification for Grey Iron Castings, Designation A-48. All castings should be Allegheny Foundry Casting, Neenah, or approved equal, as shown on the drawings.
 2. Mortar Setting Bed (if any). Mortar setting bed conforming to current ASTM C270, Type M Mortar, with latex polymer additive.
 3. Brick. As specified in the City of Pittsburgh Specifications, Section 169 entitled, "Common Masonry Brick," and revisions (optional) and ASTM C32.

CONSTRUCTION -

All work performed under this item is subject to inspection by the Pittsburgh Water and Sewer Authority or their authorized representative.

Install frame and cover as specified in the Pittsburgh Water and Sewer Authority Specifications. Set castings to the proper line and grade adjust with brick and mortar only, as shown on the contract drawings, in such a manner so as to allow for grade adjustments of $\pm 6"$. Grade adjust with brick and mortar only.

Frames and covers should be set to correct elevation on a full bed of cement mortar. Where required, final adjustment of frame to elevation should be by means of brick masonry; no more than three courses of brick should be used. Brick should be fully parged on the inside and out. All manhole frames should be bolted to the top sections of the manhole with at least two $\frac{3}{4}$ " stainless steel anchor bolts. Where brick courses are required, anchor bolts should extend from the top of the frame through the brick course and into the top precast section of the manhole. Any casting set more than $\frac{3}{16}$ of an inch above or below finished surface of the adjoining concrete, brick, block, stone, or bituminous surface, as determined by a ten foot straight edge, should be reset by the Contractor at his own expense.

MEASUREMENT AND PAYMENT -

GRADE ADJUST AND REPLACE MANHOLE FRAME AND COVER. EACH

This item includes, but is not limited to: saw-cutting, removal and disposal of pavement, sidewalks or curbs to the required limits; unclassified excavation; normal rock excavation; removal, hauling and disposal of all excavated materials; temporary plating and excavation protection; aggregate backfill and compaction; grade adjustments due to the construction phasing; coal-tar pitch, temporary blocking, supports, caps and plugs; vacuum testing; removing and disposing of existing casting(s); and cleanup and disposal of all debris and surplus materials.

ITEM 9000-0208 – REBUILD WATER VALVE BOX

DESCRIPTION - This work is to REBUILD WATER VALVE BOX as shown on the Drawings, as described herein, as directed in the field, and as specified in the current City of Pittsburgh and The Pittsburgh Water and Sewer Authority Standards for Construction and Standard Specifications.

MATERIAL - As specified in the Pittsburgh Water and Sewer Authority current standard specifications, and Section 606.2. There are no limits on vertical height adjustment.

PWSA will provide the Medium Extension Gate Valve Box (MEG). Contractor responsible for picking up at PWSA's warehouse.

CONSTRUCTION - As specified in the Pittsburgh Water and Sewer Authority current standard specifications and details, and Section 606.3 There are no limits on vertical height adjustment.

For instances where the existing water valve box is a rectangular frame and cover over a brick box, remove the existing casting and rows of brick as required to insert a standard round medium extension gate (MEG) valve box over the existing valve. Ensure that the MEG box does not bear on the waterline or valve. Backfill the void with aggregate and adjust the top to coincide with the proposed pavement grade. Refer to the detail contained within the contract drawings.

MEASUREMENT AND PAYMENT – Each

This item includes, but is not limited to: saw-cutting, removal and disposal of pavement, unclassified excavation; removing existing frames and covers, partial removal of brick valve box, installing MEG box, setting of final grade; and cleanup and disposal of all debris and surplus materials.

ITEM 9000-0209 – GRADE ADJUST WATER VALVE BOX

DESCRIPTION - This work is to GRADE ADJUST WATER VALVE BOX as shown on the Drawings, as described herein, as directed in the field, and as specified in the current City of Pittsburgh and The Pittsburgh Water and Sewer Authority Standards for Construction and Standard Specifications. This item is for existing valve boxes with conventional round covers.

MATERIAL - As specified in the Pittsburgh Water and Sewer Authority current standard specifications, and Section 606.2. There are no limits on vertical height adjustment.

PWSA will provide the Medium Extension Gate Valve Box (MEG) riser and/or adjustment ring. Contractor responsible for picking up at PWSA's warehouse.

CONSTRUCTION - As specified in the Pittsburgh Water and Sewer Authority current standard specifications and details, and Section 606.3 There are no limits on vertical height adjustment.

For standard round medium extension gate (MEG) valve boxes, adjust existing riser upward or downward, or install properly sized riser extension rings as required to achieve proposed pavement grade.

MEASUREMENT AND PAYMENT – Each

This item includes, but is not limited to: adjustment of the existing MEG box shaft and or installation of a riser ring to achieve desired final grade elevation to match new pavement.

ITEM 9000-0212 – UNFORSEEN PWSA SEWER REPAIRS

DESCRIPTION – This item provides for an agreed upon sum for additional work, including labor and materials, for unforeseen repairs or additional construction not covered in contract base bid items.

Prior to use of this item, develop a scope of work in conjunction with the owner and engineer. Submit a time and materials breakdown for anticipated work per the developed scope. Written approval from the owner is required, and work performed without documented approval is subject to non-payment.

MATERIAL – Provide required materials in accordance with the PWSA Standards. The latest version of the PWSA Standards shall be considered as a part of this specification. For materials not specifically referenced in PWSA Standards, the applicable section(s) of Publication 408, latest edition, will apply.

CONSTRUCTION – Additional construction per agreed upon scope and cost prior to performing work.

All work performed under this item is subject to inspection by the Pittsburgh Water and Sewer Authority or their authorized representative. For construction not specifically referenced in PWSA Standards, the applicable section(s) of Publication 408, latest edition, will apply.

MEASUREMENT AND PAYMENT

UNFORSEEN PWSA SEWER REPAIRS - DOLLAR

This item includes but is not limited to: Approved time and materials cost for work per the agreed to scope and price.

ITEM NO. 9000-0213 – CCTV INSPECT EXISTING OR NEW SEWER

DESCRIPTION

Furnish all labor, supervision, power equipment, and material to clean, inspect, document and report the structural and operational condition of existing and/or newly installed sewer pipe segments by closed circuit color television (CCTV) in compliance with the NASSCO Pipeline Assessment and Certification Program (PACP) standards; and in accordance with the specifications set forth herein.

MATERIAL

NASSCO Inspection Report.

CONSTRUCTION

Provide all equipment necessary for the proper high pressure water jetting and flushing of the sewers prior to the inspection by closed circuit color television. The purpose of the sewer cleaning operation is to remove such accumulation of sediment, debris, blockages, mineral deposits, grease, etc. to permit a thorough and complete examination of the condition of the sewer through internal closed circuit color television inspection. All cleaning should be performed complete from manhole to manhole.

Make up to five (5) passes through the line with high pressure water jetting equipment before internal color television inspection of the sewer. This is considered "light cleaning" and is incidental to this item.

Where it has been determined that large deposits of debris or root growth exists within the sewer lines and cleaning would require more than five (5) passes through the line with high pressure water jetting equipment, then the owner will be responsible for heavy cleaning.

All sludge, dirt, sand, rocks, grease, roots, and other solid or semisolid material resulting from the preparatory cleaning operation should be removed at the downstream structure of the section being cleaning. Passing material from structure section to structure, which can cause line stoppages, accumulations of sand in wet wells or damage to pumping equipment, is not be permitted.

All dirt, debris, roots, and other material removed from the sewers must be hauled away by an approved disposal site at the expense of the CONTRACTOR. All regulations of environmental regulating agencies are to be followed.

The equipment used for sewer cleaning should be capable of all removing dirt, grease, rocks, roots, and other deleterious materials. The equipment is to be selected by the CONTRACTOR to prevent damage to the pipe. Cleaning equipment capable of cleaning

lengths up to 1,000 feet should be provided. Equipment must be able to clean this length with vehicular access to one structure only.

Cleaning should be of the entire reach between structures. If cleaning of an entire section cannot be successfully performed from a structure, set up the equipment on the other structure and cleaning again attempted without additional compensation or consideration.

Furnish all labor, electronic equipment, and technicians to perform the closed-circuit television of the sewers and selected laterals. Operation of the equipment is to be controlled from above ground with a skilled technician at the control panel in the television studio, controlling the movement of the television camera through the sewer in either direction. Televising equipment for laterals should have the capability of televising not less than 50 ft up the lateral from the main sewer. Lateral inspection will be performed only when the main sewer does not exceed 24 in. in diameter.

Televising equipment includes the television camera, television monitor, cables, power source, lights and other equipment necessary to the televising operation

Prior to televising, review the CCTV inspection plan, which should include PWSA's manhole, junction, inlet and catch basin numbers as well as information on pipe size, material, etc.

Provide comprehensive data for each section including:

Location	Street	Operators Name
Date	Time	Manhole Numbers
Weather	Zone (if appl.)	Pipe Material
Pipe Size	Joint Length	Comment of Line
Vehicle #	Camera Used	Flow Direction

The Contractor should provide a copy of the inspection to the owner immediately after performing the work.

1. Still Photographs - During the course of the inspection and as required by the Engineer, actual video information will be transmitted from the television monitor to a video image printer to produce color still image photographs of faults.
2. Television Inspection Report - After completion of each section of sewer inspected, furnish a computerized report. This report will be generated by an onboard computer and will provide commentary on photographs and fault areas. The report will describe structural defects, misalignment, infiltration sources and root intrusions. The report will also describe location of roots, defective joints, defective pipes, sewer line depressions, break-in lateral connections, grease accumulations and sediment accumulations.

Furnish the owner with two (2) copies of a sewer inspection report on DVD or other acceptable media.

MEASUREMENT AND PAYMENT

CCTV INSPECT EXISTING OR NEW SEWER. Hour.

Includes all labor, materials, tools, and equipment necessary to perform light cleaning and closed- circuit television inspection of sewers either existing, constructed or repaired as part of this contract or at the direction of the owner. Clean and televise sewers as indicated in the work listed in the above description and construction sections, including the satisfactory removal, and disposal of unsuitable and surplus material.

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SECTION 02082

PUBLIC MANHOLES AND STRUCTURES

Revision Log

Revision Date	Part	Revision
9/12/2023	1.3	Added AASHTO M306 reference.
9/12/2023	2.3	Replaced in its entirety.
9/12/2023	2.5	Added Paragraph D "Anchor Bolts."
9/12/2023	3.7.E	Replaced with new paragraph.

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Modular precast concrete manholes and structures with tongue-and-groove joints with or without masonry transition to cover frame, covers, anchorage, and accessories.
2. Masonry manhole and structure sections with masonry transition to cover frame, covers, anchorage, and accessories.
3. Bedding and cover materials.

Delete specification sections listed in paragraph "B." that are NOT included in the contract documents. The following sections must be included (unless references in this specification are rephrased): Section 02281, Manhole and Catch Basin Grade Adjustment, Section 02324, Trenching, Backfilling and Compaction, Section 02241, Dewatering, Section 02952, Sewer and Manhole Testing. Section 03300, Cast-In-Place Concrete, and Section 03600, Grout.

B. Related Sections:

1. Section 02060 – Aggregates for Earthwork
2. Section 02241 – Dewatering
3. Section 02281 – Manhole and Catch Basin Grade Adjustment
4. Section 02324 – Trenching, Backfilling, and Compaction
5. Section 02513 – Public Water Distribution Piping
6. Section 02539 – Public Sanitary and Storm Sewer Piping
7. Section 02952 – Sewer and Manhole Testing
8. Section 03300 – Cast-In-Place Concrete
9. Section 03600 – Grout

1.2 MEASUREMENT AND PAYMENT

- A. See Section 01200 – Price and Payment Procedures.

1.3 REFERENCES

- A. American Association of State Highway Transportation Officials (AASHTO):

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1. AASHTO M31 – Deformed and Plain Carbon and Low-Alloy Steel Bars for Concrete Reinforcement.
 2. AASHTO M55 – Standard Method of Test for Steel Welded Wire Reinforcement, Plain, for Concrete.
 3. AASHTO M306 – Standard Specification for Drainage, Sewer, Utility, and Related Castings.
- B. American Concrete Institute (ACI):
1. ACI 530/530.1 – Building Code Requirements for Masonry Structures and Specifications for Masonry Structures.
- C. ASTM International (ASTM):
1. ASTM A48/A48M – Standard Specification for Gray Iron Castings.
 2. ASTM A615 – Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
 3. ASTM C32 – Standard Specification for Sewer and Manhole Brick (Made from Clay or Shale).
 4. ASTM C478 – Standard Specification for Precast Reinforced Concrete Manhole Sections.
 5. ASTM C913 – Standard Specification for Precast Concrete Water and Wastewater Structures.
 6. ASTM C923 – Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes and Laterals.
 7. ASTM C990 – Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants.
 8. ASTM D1227 – Standard Specification for Emulsified Asphalt Used as a Protective Coating for Roofing.
 9. ASTM F593 – Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs.

1.4 SUBMITTALS

- A. See Section 01330, Submittal Procedures: Requirements for submittals.
- B. Shop Drawings: Indicate structure locations.
- C. Product Data: Submit manhole covers, component construction, features, configuration, dimensions.

Confirm Qualification section referenced in paragraph “D” is accurate.

- D. Qualifications listed in paragraph 1.6, Qualifications.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with the more stringent requirements of the City of Pittsburgh, Allegheny County, Pennsylvania Department of Transportation (PennDOT), and OWNER.
- B. Shop Inspection:

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1. All materials furnished by the CONTRACTOR shall be certified by the supplier for compliance with the pertinent specifications. Shop inspections and testing may be required. The cost of shop testing shall be borne by the supplier or the CONTRACTOR.
- C. Field Inspection:
1. All materials furnished shall be tested for defects in material and/or workmanship in the manner specified and in the presence of and as approved by the OWNER.
- D. Source Quality Control:
1. Maintain uniform quality of products and component compatibility by using the products of one manufacturer in the case of precast reinforced concrete manholes.
 2. Obtain certificate of construction compliance with ASTM C478 from the precast reinforced concrete manhole manufacturer.
 3. Obtain sworn certification from manufacturer that manholes were constructed using Type II Portland cement. No payment for manholes shall be approved until such certificate has been submitted.
 4. Obtain certificate of material compliance with ASTM A48, Class 35 tensile strength from the manhole frame and cover manufacturer. Furnish certification that tensile test bars were from same pour as castings.
 5. Obtain certification from manufacturer that manhole frame and cover meets or exceeds AASHTO HS-20 highway loading requirements per AASHTO M306.
 6. Sections shall be steam cured and shall not be shipped until at least 5 days after having been cast.
 7. Mark inside of each precast structure by indentation or waterproof paint showing date of manufacture, manufacturer, and identifying symbols and numbers shown on Drawings to indicate its intended use.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum three years documented experience.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Comply with Section 01600, Product Requirements: Product storage and handling requirements.
- B. Comply with precast concrete manufacturer's instructions and ASTM C913 for unloading, storing, and moving precast manholes and drainage structures.
- C. Store precast concrete manholes and drainage structures to prevent damage to OWNER's property or other public or private property. Repair property damaged at CONTRACTOR's expense.

1.8 ENVIRONMENTAL REQUIREMENTS

- A. See Section 01600, Product Requirements.
- B. Cold Weather Requirements: ACI 530/530.1.

- C. In no instance set or construct manhole bases on subgrade containing frost.
- D. To improve workability of Preformed Plastic Sealing Compound during cold weather, store such at temperature above 70 degrees Fahrenheit or artificially warm compound in a manner satisfactory to the OWNER.

PART 2 PRODUCTS

2.1 GENERAL

- A. Manholes shall consist of precast reinforced concrete riser, top and bases, complete with cast iron frames and covers.
- B. Flat slab tops are not to be used unless shown on the Drawings or required and approved by the OWNER.
- C. Flat slab tops, if required/approved, shall have a minimum thickness of 6-inches, and shall be reinforced with steel in accordance with the design requirements specified in ASTM C478.

2.2 MANHOLES AND STRUCTURES

- A. Manhole and Structure Sections:
 - 1. Reinforced precast concrete in accordance with ASTM C478 with gaskets in accordance with ASTM C923.
 - 2. Joints for Precast Manholes and Structures: In accordance with ASTM C913.
 - a. Joint Sealant: ASTM C990.
 - 3. Lift holes may not pass from the inside wall completely through to the outside wall. No more than 2 lift holes may be cast in each section.
 - 4. Top sections shall have a top width of such design and dimensions as to properly support the required manhole frame and cover.
 - 5. The barrel sections shall have tongue and groove ends and a minimum wall thickness of 5-inches or shall be 1/12 of the internal diameter of the riser or largest cone section.
 - 6. The exterior surface of all sanitary and combination sewer precast manhole sections shall be coated at the precast manufacturer's factory with an approved asphalt emulsion coating complying with the requirements of ASTM D1227 for sanitary and combination sewers applied as recommended by the coating Manufacturer.
- B. Cast in Place Manhole Bases
 - 1. Concrete shall have a minimum compressive strength of 4,000 psi at 28 days. Reinforcement shall be in accordance with ASTM A615.
 - 2. Base shall be poured from PennDOT Class A or Class AA Concrete, as directed by OWNER.
 - 3. Reinforcing steel shall conform to the requirements of AASHTO M31 (billet steel) or AASHTO M55 (Welded Steel Wire Fabric).
 - 4. Bases shall be poured on solid ground.

Confirm Waterstop section referenced in subparagraph "5" below is accurate.

5. Waterstops shall be used at the horizontal joint of poured-in-place manholes per paragraph 2.6, Waterstops.

C. Precast Manhole and Bases

1. Bases shall be cast in accordance with ASTM C478.
2. Base walls shall be cast integral to the base.
3. Bases shall be suitably shaped by means of accurate bell-ring forms to receive the barrel sections.
4. A manufacturer installed A-Lok, Z-Lok, or approved equal shall be provided prior to the precast manhole base being delivered to the Site.

D. Clay Brick Units: Comply with ASTM C32 Sewer and Manhole Brick.

E. Mortar and Grout: see Section 03600, Grout.

2.3 MANHOLE FRAMES AND COVERS

A. Manhole Covers:

1. Castings shall be of good quality, strong, tough, even grained cast iron, smooth, free from scale, lumps, blisters, sandholes, and defects of any nature.
2. Contact surfaces shall be machined at the foundry to prevent rocking of covers in any orientation. All castings shall be thoroughly cleaned and subject to careful hammer inspection.
3. Material shall be Cast Iron Gray, Class 35B, in accordance with ASTM A48.
4. Rated for HS-20 loading in accordance with AASHTO M306.
5. Shall not be dipped or coated.
6. Contain 2-inch-high lettering flush with top surface that clearly identifies the OWNER's name and type of facility, as follows:
 - a. Sanitary or Combination Sewer: SEWER.
 - b. Storm Sewer: STORM.
 - c. Water System: WATER.
7. Cover Diameter: 26 5/8-inches.
8. Cover Thickness: 1 5/8-inch.
9. Lifthole/vent shall be 1 1/4-inch diameter, centered on the cover.
10. Non-letters areas shall be cast with "X" pattern.
11. Manufactures:
 - a. Sanitary or Combination Sewer:
 - 1) Product Number: 00196522 by EJ Group, Inc.
 - 2) Product Number: NF-16530065 by Neenah Enterprises, Inc.
 - 3) Or Approved Equal.
 - b. Storm Sewer:
 - 1) Product Number: 00196526 by EJ Group, Inc.
 - 2) Product Number: NF-16530070 by Neenah Enterprises, Inc.
 - 3) Or Approved Equal.
 - c. Water System
 - 1) Product Number: 00196542 by EJ Group, Inc.
 - 2) Product Number: NF-16530072 by Neenah Enterprises, Inc.
 - 3) Or Approved Equal.

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B. Manhole Frames:

1. Castings shall be of good quality, strong, tough, even grained cast iron, smooth, free from scale, lumps, blisters, sandholes, and defects of any nature.
2. Contact surfaces shall be machined at the foundry to prevent rocking of covers in any orientation. All castings shall be thoroughly cleaned and subject to careful hammer inspection.
3. Material shall be Cast Iron Gray, Class 35B, in accordance with ASTM A48.
4. Rated for HS-20 loading in accordance with AASHTO M306.
5. Shall not be dipped or coated.
6. Frame opening diameter shall be 27-inches and clear opening diameter shall be a minimum of 24-inches.
7. Frame opening depth shall ensure the top of the cover is flush with the top of the frame.
8. Frame height:
 - a. 6- to 7-inches for sidewalks and unimproved areas.
 - b. 9-inches for concrete and asphalt roadways.
 - c. 13-inches for brick and blockstone roadways.
 - 1) Riser rings, in accordance with Section 02281, may be used with 9-inch frames to achieve 13-inch frame height requirement.
9. Base flange shall be of suitable dimensions to mount to the structure.
10. Frames shall have four, 1-inch diameter bolt holes that align with the predrilled bolt hole locations of the rings or risers.
11. Manufactures:
 - a. Product Number: 00196511 by EJ Group, Inc.
 - b. Product Number: 00196517 by EJ Group, Inc.
 - c. Product Number: NF-16530053 by Neenah Enterprises, Inc.
 - d. Product Number: NF-16530052 by Neenah Enterprises, Inc.

2.4 ADJUSTMENT RINGS AND RISERS

- A. Conform to Section 02281, Manhole and Catch Basin Grade Adjustment.

2.5 COMPONENTS

Select ONE option in red text and delete the unused option for paragraph "A." (Final submittal should not have any red text or brackets.) Standard details are typically only used for yearly IDIQ contracts. Delete references to details NOT included in the contract documents.

- A. Provide per [Drawings] [Standard Detail(s): WS-10, WS-10A, WS-10C, SA-2, SA-2A, SA-10, SA-10A, SA-10C].
- B. Manhole and Structure Steps:
1. Manhole steps shall be installed by the precast manufacturer and shall be aligned vertically and spaced so as to be on equal centers in the assembled manhole at a maximum uniform distance apart of 12-inches.
 2. Manhole steps in existing manholes shall be installed by drilling into the masonry and securing with grout.
 3. Manhole steps shall be:

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- a. Composite Steps (Type II CR. 491408) with a steel core Grade 60 deformed steel bar (comply with ASTM A615), 3/8-inch diameter.
 - 1) In severe service areas, the OWNER may require 1/2-inch diameter bars and a Co-polymer Polypropylene cover.

C. Mechanical Sleeve Seals

1. Manufacturers:
 - a. Link-Seal by Garlock Pipeline Technologies.
 - b. Innerlynx by Advance Products & Systems, Inc.
 - c. Or Approved Equal.
2. Product Description: Modular mechanical type, consisting of interlocking synthetic rubber links shaped to continuously fill annular space between object and sleeve or core-drilled hole, connected with bolts and pressure plates causing rubber sealing elements to expand when tightened, providing watertight seal and electrical insulation.

D. Anchor Bolts

1. Stainless steel in conformance with ASTM F593.

2.6 WATERSTOPS

- A. Waterstop gaskets shall be composed of virgin Polyvinyl Chloride (PVC) sized for the respective pipe and secured by approved stainless steel clamp.

2.7 INVERT CHANNELS

Select ONE option in red text and delete the unused option for paragraph "A." (Final submittal should not have any red text or brackets.) Standard details are typically only used for yearly IDIQ contracts. Confirm Standard Detail SA-2A is included in the contract documents.

- A. Conform with [Drawings] [Standard Detail SA-2A].

PART 3 EXECUTION

3.1 EXAMINATION

- A. See Section 01300, Administrative Requirements: Verification of existing conditions before starting Work.
- B. Verify items provided by other sections of Work are properly sized and located.
- C. Verify built-in items are in proper location, and ready for roughing into Work.
- D. Verify correct size of manhole and structure excavation.

3.2 PREPARATION

- A. A waterstop gasket and approved clamp assembly shall be installed around the pipe when entering and leaving a manhole wall.
- B. Do not install manholes and structures where site conditions induce loads exceeding structural capacity of manholes or structures.
- C. Inspect precast concrete manholes and structures immediately prior to placement in excavation to verify manholes and structures are internally clean and free from damage. Remove and replace damaged units.
- D. The excavation shall be properly dewatered while placing bedding material and pouring the concrete.

3.3 INSTALLATION - GENERAL

- A. Excavation and Backfill:
 - 1. Excavate for manholes and structures in accordance with Section 02324, Trenching, Backfilling, and Compaction. Provide clearance around sidewalls of manhole or structure for construction operations, granular backfill and when in the presence of saturated soils, geotextile filter fabric.
 - 2. When groundwater is encountered, prevent accumulation of water in excavations. Place manholes or structures in dry trench. CONTRACTOR shall dewater all excavations in accordance with Section 02241, Dewatering.
- B. Place foundation slab, trowel top surface level.
- C. Form or place sections plumb and level, trim to correct elevations, anchor to foundation slab as applicable.
- D. Install manholes and structures, bearing firmly and fully on 12-inches of Type A1 crushed stone bedding at proper grade and alignment, consolidated in accordance with provisions of Section 02324, Trenching, Backfilling, and Compaction.
- E. Backfill excavations for manholes and structures in accordance with Section 02324, Trenching, Backfilling, and Compaction.
- F. Set cover frames and covers level without tipping, to correct elevations.

3.4 MASONRY MANHOLE AND STRUCTURE INSTALLATION

- A. Mortar shall be composed of Portland cement, hydrated lime, and sand in the preparation of one part cement to 1/2-part lime, to 4-112 parts sand (by volume) or as approved by the OWNER.
- B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.

- C. Lay masonry units in running bond. Course one unit and one mortar joint to equal 8-inches.
- D. Joints shall be painted with mortar and joints thoroughly tooled so as to be slightly concave with a hard polished surface free from drying cracks.
- E. Lay masonry units in full bed of mortar, with full head joints, uniformly jointed with other Work.
- F. Install joint reinforcement 16-inches on center.
- G. Place joint reinforcement in first and second horizontal joints above base pad and below cover frame opening.
- H. Install fabricated metal items as Work progresses.
- I. Cut and fit for pipe, conduit, sleeves, etc.
- J. Paint exterior with 2 coats of bituminous interior coating at rate of 120 square feet per gallon for each coat.
 - 1. Manufacturers:
 - a. Carboline Bitumastic 300M by Somay Products.
 - b. Sonoshield HLM 500 by Sonneborn.
 - c. Or Approved Equal.
- K. Set cover frames on joint sealant and covers shall be level without tipping, to correct elevations.
- L. Grout base of shaft sections to achieve slope to exit piping. Trowel smooth. Contour to form continuous drainage channel.

3.5 PRECAST CONCRETE MANHOLE AND STRUCTURE INSTALLATION

- A. Lift precast manholes and structures at lifting points designated by Manufacturer.
- B. When lowering manholes and structures into excavations and joining pipe to units, take precautions to ensure interior of pipeline and manhole or structure remains clean.
- C. Set precast manholes bases and structures bearing firmly and fully on 12-inches of Type A1 crushed stone bedding, consolidated in accordance with provisions of Section 02324, Trenching, Backfilling, and Compaction.

Confirm Components section referenced in paragraph "D." is accurate.

- D. Assemble multi-section manholes and structures by lowering each section into excavation. Install joint gaskets between precast sections in accordance with manufacturer's recommendations and per paragraph 2.5, Components. Set level and firmly position base section before placing additional sections.

- E. Remove foreign materials from joint surfaces and verify sealing materials are placed properly. Maintain alignment between sections by using guide devices affixed to lower section.
- F. Verify manholes and structures installed satisfy required alignment and grade.
- G. Remove knockouts without creating openings larger than required to receive pipe. Fill annular space per Section 03600, Grout.
- H. Cut pipe to finish flush with interior of manhole or structure.
- I. Grout base of shaft sections to achieve slope to exit piping. Trowel smooth. Contour to form continuous drainage channel.

3.6 CAST-IN-PLACE CONCRETE MANHOLE AND STRUCTURE INSTALLATION

Select ONE option in red text and delete the unused option for paragraph "A." and "C." (Final submittal should not have any red text.) Standard details are typically only used for yearly IDIQ contracts.

- A. Prepare crushed stone bedding or other support system shown on [Drawings][Standard Details], to receive foundation slab as specified for precast manholes and structures.
- B. Erect and brace forms against movement in accordance with Section 03300, Cast-In-Place Concrete.
- C. Install reinforcing steel as indicated on [Drawings][Standard Details] and in accordance with Section 03300, Cast-In-Place Concrete.
- D. Place and cure concrete in accordance with Section 03300, Cast-In-Place Concrete.

3.7 CASTINGS INSTALLATION

- A. Frames and covers shall be set into two, 1/2-inch bead rings of elastomeric sealant and secured with a minimum of two, 3/4-inch stainless steel anchor bolts.
- B. Where required, final adjustment of frame to elevation shall conform to Section 02281, Manhole and Catch Basin Grade Adjustment.
- C. Where grade rings are used, anchor bolts shall extend from the top of the frame through the grade rings and into the top precast section of the manhole.
- D. Any casting set more than 3/16-inch above or below the finished surface of the adjoining concrete, brick, block, stone, or bituminous surface, as determined by a 10-foot straight edge, shall be reset by the CONTRACTOR at his own expense.
- E. Final rim elevation for manholes and other structures with covers located within unpaved areas shall be approved by the OWNER prior to installation.

3.8 FIELD QUALITY CONTROL

- A. See Section 01400, Quality Requirements.
- B. See Section 01700, Execution Requirements.
- C. Test cast-in-place concrete in accordance with Section 03300, Cast In-Place Concrete.
- D. Test concrete manhole and structure sections per infiltration test in accordance with Section 02952, Sewer and Manhole Testing.

END OF SECTION

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SECTION 02085

WATER UTILITY DISTRIBUTION VALVES

Revision Log

Revision Date	Part	Revision
10/18/2023	Full	Addition of Line Stops.

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Valves.
 2. Valve boxes.
 3. Line Stops.

Delete specification sections listed in paragraph "B." that are NOT included in the contract documents. The following sections must be included (unless references in this specification are rephrased): Section 02082, Public Manholes and Structures, Section 02324, Trenching, Backfilling and Compaction, Section 02513, Public Water Distribution Piping. Section 02516, Flushing, Disinfection, and Dechlorination of Water Pipelines, and Section 03300, Cast-In-Place Concrete.

- B. Related Sections:
1. Section 02060 – Aggregates for Earthwork
 2. Section 02082 – Public Manholes and Structures
 3. Section 02086 – Water Utility Fire Hydrants
 4. Section 02324 – Trenching, Backfilling and Compaction
 5. Section 02513 – Public Water Distribution Piping
 6. Section 02515 – Water Service Connections
 7. Section 02516 – Flushing, Disinfection, and Dechlorination of Water Pipelines
 8. Section 03300 – Cast-In-Place Concrete

1.2 MEASUREMENT AND PAYMENT

- A. See Section 01200 – Price and Payment Procedures.

1.3 REFERENCES

- A. ASTM International (ASTM):
1. ASTM A276 – Standard Specification for Stainless Steel Bars and Shapes.
 2. ASTM A307 – Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60000 PSI Tensile Strength.
 3. ASTM B584 – Standard Specification for Copper Alloy Sand Castings for General Applications.

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4. ASTM B763 – Copper Alloy Sand Castings for Valve Applications.
 5. ASTM F593 – Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs.
- B. American Water Works Association (AWWA):
1. AWWA C111 – Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
 2. AWWA C500 – Metal-Seated Gate Valves for Water Supply Service.
 3. AWWA C509 – Resilient-Seated Gate Valves for Water-Supply Service.
 4. AWWA C515 – Reduced-Wall, Resilient Seated Gate Valves for Water Supply Service.
 5. AWWA C550 – Protecting Epoxy Interior Coating for Valves and Hydrants.
 6. AWWA C600 – Installation of Ductile-Iron Water Mains and Their Appurtenances.
- C. National Sanitation Foundation/American National Standard Institute (NSF/ANSI):
1. NSF/ANSI 61 – Drinking Water System Components.

1.4 SUBMITTALS

- A. See Section 01330, Submittal Procedures: Requirements for submittals.
- B. Shop Drawing:
1. Submit manufacturer's shop drawings showing valves, operators, gear ratios, design flows and pressure differential, performance charts, and parts list for all valves 16-inch and larger.
 2. Installation Plan: Submit description of proposed installation.
- C. Design Data: Submit manufacturer's latest published literature including illustrations, installation instructions, maintenance instructions, and parts lists.
- D. Manufacturer's Certificates: Submit Statement of Compliance, supporting data, from material suppliers attesting that valves and accessories provided meet or exceed AWWA Standards and specification requirements.
1. Submit Certified test reports for tests specified in the referenced standards for valves 16-inches and larger.
 2. Submit Certified test reports for tests performed on valves and valve operators for valves 16-inches and larger.
- E. Submit vendor cut sheets, procedures, and detailed plan for all Line Stops.

1.5 CLOSEOUT SUBMITTALS

- A. See Section 01700, Execution Requirements: Requirements for submittals.
- B. Project Record Documents: Record actual locations of valves.
- C. Provide Operation and Maintenance Data for valves.

1.6 QUALITY ASSURANCE

- A. Perform Work in accordance with referenced standards and OWNER standards.

- B. Temporary Line Stops shall only be installed by vendor personnel or CONTRACTOR personnel trained and certified by the Line Stop vendor.

1.7 QUALIFICATIONS

- A. Manufacturer: company specializing in manufacturing Products specified in this section with minimum 3 years documented experience.
- B. Installer: Company specializing in performing Work of this Section with minimum 3 years documented experience.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. See Section 01600, Product Requirements: Requirements for transporting, handling, storing, and protecting products.
- B. Prepare valves and accessories for shipment according to AWWA Standards and seal valve and ends to prevent entry of foreign matter into product body.
- C. Deliver and store valves in shipping containers with labeling in place.
- D. Store products in areas protected from weather, moisture, or possible damage; do not store products directly on ground; handle products to prevent damage to interior or exterior surfaces.

1.9 ENVIRONMENTAL REQUIREMENTS

- A. See Section 01600, Product Requirements: Environmental conditions affecting products on Site.
- B. Conduct operations not to interfere with, interrupt, damage, destroy, or endanger integrity of surface or subsurface structures or utilities, and landscape in immediate or adjacent areas.

1.10 COORDINATION

- A. See Section 01300, Administrative Requirements: Requirements for coordination.
- B. Coordinate Work with City of Pittsburgh, Allegheny County, Pennsylvania Department of Transportation (PennDOT), and OWNER.

1.11 MAINTENANCE MATERIALS

- A. See Section 01700, Execution Requirements: Requirements for maintenance materials.

PART 2 PRODUCTS

2.1 GATE VALVES LARGER THAN 12-INCH DIAMETER

- A. Resilient Wedge Gate Valves: AWWA C509 or AWWA C515; iron body, bronze, or ductile iron; including the manufacturer's name, pressure rating, and year of fabrication cast into valve body.
1. Resilient seats.
 2. Stem.
 - a. Non-rising stem.
 - b. Minimum tensile strength: 60,000 pounds per square inch.
 - c. Manganese bronze per ASTM B584/ASTM B763 or Type 304 or 316 Stainless Steel per ASTM A276.
 3. Seals: O-ring stem seals.
 4. Operator:
 - a. Direct Bury: Operating Nut: 2-inch square; open clockwise unless in treatment plant or pump station.
 - b. Valve Vault or above grade: Handwheel: Open clockwise unless in treatment plant or pump station.
 5. Ends:
 - a. Direct Bury: Restrained Joints
 - 1) MEGALUG Series 1100 with Grade 304 Stainless Steel Bolts/Nuts and Fusion Bonded Epoxy Coating.
 - 2) Flex-Ring Joint by American or boltless positive joint restraint equal to the Flex-Ring Joint by American.
 - 3) Or Approved Equal.
 - b. Valve Vault or above grade: Flanged with Type 306 Stainless Steel nuts and bolts.
 6. Coating: AWWA C550; interior/exterior epoxy.
 7. Sizes 16-inch diameter and larger: 150 pounds per square inch gauge.
 - a. Valve must have built-in bypass in areas expected to reach working pressures in excess of 100 pounds per square inch.
 - b. Valves 16-inch diameter and greater shall be installed horizontally with bevel gearing or vertically without gearing.
 8. Bolts, Hex Cap Screws, and Studs: Stainless Steel per ASTM F593.
- B. Manufacturers:
1. Mueller Company.
 2. Clow Eddy – Iowa.
 3. American Flow Control.
 4. Or Approved Equal.

2.2 GATE VALVES 3-INCH THROUGH 12-INCH DIAMETER

- A. Resilient Wedge Gate Valves: AWWA C509 or AWWA C515; iron body, bronze, or ductile iron; including the manufacturer's name, pressure rating, and year of fabrication cast into valve body.
1. Resilient seats.
 2. Stem:

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- a. Non-rising stem.
- b. Minimum tensile strength: 60,000 pounds per square inch.
- c. Manganese bronze per ASTM B584/ASTM B763 or Type 304 or 316 Stainless Steel per ASTM A276.
3. Seals: O-ring stem seals.
4. Operator:
 - a. Direct Bury: Operating Nut: 2-inch square; open clockwise unless in treatment plant or pump station.
 - b. Valve Vault or above grade: Handwheel: Open clockwise unless in treatment plant or pump station.
5. Ends:
 - a. Direct Bury: Mechanical Joint with gaskets per AWWA C111 and low alloy steel bolts per ASTM A307.
 - 1) Restrain end to pipe with Mechanical Joint Restraint Gland conforming to Section 02513, Public Water Distribution Piping.
 - b. Valve Vault or above grade: Flanged with Type 306 Stainless Steel nuts and bolts.
6. Coating: AWWA C550; interior/exterior epoxy.
7. Sizes 12-inch diameter and smaller: 250 pounds per square inch gauge.
8. Bolts, Hex Cap Screws, and Studs: Stainless Steel per ASTM F593.

- B. Manufacturers:
1. Mueller Company.
 2. Clow Eddy - Iowa.
 3. American Flow Control.
 4. Or Approved Equal.

2.3 MEDIUM EXTENSION GATE VALVE BOXES

- A. Underground valves installed at a depth of 6 feet or less to the operating nut shall be equipped with an MEG. MEGs shall be made of cast iron and have an internal diameter of 5 1/4-inches. The base, top and lid shall be round, and shall have "WATER" cast on the lid.
- B. 12-inch diameter Valves and smaller: Domestic cast iron, three-piece, screw type; round base. Internal Diameter of 5 1/4-inches, with Cast iron lid marked "WATER."

2.4 MANHOLES

- A. See Section 02082, Public Manholes and Structures.

Select ONE option in red text and delete the unused option for paragraphs "B." and "C." (Final submittal should not have any red text or brackets.) Standard details are typically only used for yearly IDIQ contracts.

- B. Valves 16-inches in diameter and greater shall be installed horizontally with bevel gearing. Operating mechanism shall be centered in manhole per [Drawings][Standard Details], unless otherwise noted.
- C. If field conditions do not allow the installation of the horizontal valve with manhole, based on underground utility conflicts at the valve location, valve may be installed vertically without

gearing at OWNER'S discretion. Operating mechanism shall be centered in manhole per [Drawings][Standard Details].

- D. Prior to procuring valve assembly, CONTRACTOR shall perform exploratory excavations necessary to determine clearances required for valve and manhole installation.
- E. If field conditions do not allow the installation of the manhole on a horizontal nor vertical valve, based on underground utility conflicts at the valve location, OWNER shall determine if an MEG can be placed upon the valve at the particular location in lieu of the manhole structure.

2.5 ACCESSORIES

- A. Concrete for Thrust Restraints: Concrete type specified in Section 03300, Cast-In-Place Concrete.
- B. Valve Box Aligner: High-strength, plastic device designed to automatically center valve box base and prevent valve box base from shifting off center during backfilling.
- C. Polyethylene wrap specified in Section 02513, Public Water Distribution Piping.

2.6 LINE STOPS

- A. Line stops are to be used where specified to temporarily stop water line water flow without depressurizing the entire line. The line stop parts and installation equipment are to be rated at a minimum of 150 pounds per square gauge working pressure unless otherwise specified.
- B. Materials and Construction:
 - 1. Tapping saddles shall have 360 degrees clamping on the main.
 - 2. Main sizes 4-inch to 8-inch to be fabricated of Grade 304 Stainless Steel.
 - 3. Main sizes 10-inch and greater to be fabricated Carbon Steel with 2556.11 5/99 epoxy coating.
 - 4. All bolts and fasteners are to be Grade 304 Stainless Steel and the saddle shall be installed with Buna-N or neoprene rubber full facing gasket.
 - 5. The stopping device attaching nozzle to be manufacturer's standard with connecting threads or flange face, and the nozzle internal diameter to be machine with a shelf to provide a position stop for the closure plug.
 - 6. The closure plug is to be fabricated carbon steel, ductile iron, or malleable iron with at least one Buna-N or neoprene O-Ring seal on the outside diameter.
 - 7. Corrosion Resistant Coatings:
 - a. Non-Stainless Steel permanently installed parts to have manufacturer's standard red or black water base epoxy coating.
 - 8. Connection Tapping saddle shall be fabricated with dimensions to fit on concrete, steel, polyvinyl chloride pipe, cast iron, and ductile iron main as specified.
 - 9. Manufacturers:
 - a. Hydra-Stop, Inc.
 - b. International Piping Services Co. (IPSCO).
 - c. JCM 440.
 - d. Or Approved Equal.

PART 3 EXECUTION

3.1 EXAMINATION

- A. See Section 01300, Administrative Requirements: Verify existing conditions before starting Work.

Select ONE option in red text and delete the unused option for paragraph "B." (Final submittal should not have any red text or brackets.) Standard details are typically only used for yearly IDIQ contracts.

- B. Determine exact location and size of valves from [Drawings][Standard Details]; obtain clarification and directions from OWNER prior to execution of Work.
- C. Verify invert elevations of Work prior to excavation and installation of valves.

3.2 PREPARATION

- A. Identify required lines, levels, contours, and datum locations.
- B. Locate, identify, and protect utilities to remain from damage.
- C. Do not interrupt existing utilities without permission and without making arrangements to provide temporary utility services.
1. OWNER not less than 3 days in advance of proposed utility interruption.
 2. Do not proceed without written permission from the OWNER.
- D. Perform trench excavation, backfilling, and compaction in accordance with Section 02324, Trenching, Backfilling and Compaction.

3.3 INSTALLATION

Select ONE option in red text and delete the unused option for paragraph "A." (Final submittal should not have any red text or brackets.) Standard details are typically only used for yearly IDIQ contracts.

- A. Valves 16-inches and larger shall be installed per [Drawings][Standard Details].
- B. Install valves in conjunction with pipe laying; set valves plumb.
- C. Provide buried valves with valve boxes installed flush with finished grade.
- D. Wrap valves with polyethylene wrap in accordance Section 02513, Public Water Distribution Piping.

3.4 DISINFECTION OF DOMESTIC WATER PIPING SYSTEM

- A. Flush and disinfect system in accordance with Section 02516, Flushing, Disinfection, and Dechlorination of Water Pipelines.

3.5 LINE STOP INSTALLATION

- A. Temporary Line Stops shall only be installed by vendor personnel or CONTRACTOR personnel trained and certified by the Line Stop vendor.

3.6 FIELD QUALITY CONTROL

- A. See Section 01400, Quality Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Pressure test system in accordance with AWWA C600 and the following:
1. Test Pressure: Not less than 150 pounds per square inch or 50 pounds per square inch in excess of maximum working pressure, whichever is greater.
 2. Conduct hydrostatic test for at least a 2-hour duration.
 3. Fill section to be tested with water slowly, expel air from piping at high points. Install corporation cocks at high points. Close air vents and corporation cocks after air is expelled. Raise pressure to specified test pressure.
 4. Observe joints, fittings, and valves under test. Remove and renew cracked pipe, joints, fittings, and valves showing visible leakage. Retest.
 5. Correct visible deficiencies and continue testing at same test pressure for additional 2-hours to determine leakage rate. Maintain pressure within plus or minus 5 pounds per square inch gauge of test pressure. Leakage is defined as quantity of water supplied to piping necessary to maintain test pressure during period of test.
 6. Compute maximum allowable leakage by the following formula:

$L = (SDP^{0.5})/C$
L = testing allowance, in gallons per hour
S = length of pipe tested, in feet
D = nominal diameter of pipe, in inches
P = average test pressure during hydrostatic test, in psig
C = 148,000
When pipe under test contains sections of various diameters, calculate allowable leakage from sum of computed leakage for each size.

7. When test of pipe indicates leakage greater than allowed, locate source of leakage, make corrections and retest until leakage is within allowable limits. Correct visible leaks regardless of quantity of leakage.

END OF SECTION

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SECTION 02281

MANHOLE AND CATCH BASIN GRADE ADJUSTMENT

Revision Log

Revision Date	Part	Revision

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Raising manhole frames and covers.
 2. Replacing manhole frames and covers.

Delete specification sections listed in paragraph "B." that are NOT included in the contract documents. The following sections must be included (unless references in this specification are rephrased): Section 02082, Public Manholes and Structures, Section 02740, Asphalt Pavement, and Section 02750, Concrete Pavement.

- B. Related Sections:
1. Section 02082 – Public Manholes and Structures
 2. Section 02539 – Public Sanitary and Storm Sewer Piping
 3. Section 02740 – Asphalt Pavement
 4. Section 02750 – Concrete Pavement
 5. Section 03300 – Cast-In-Place Concrete

1.2 MEASUREMENT AND PAYMENT

- A. See Section 01200 – Price and Payment Procedures.

1.3 REFERENCES

- A. ASTM International (ASTM):
1. ASTM C478 – Standard Specification for Circular Precast Reinforced Concrete Manhole Sections.
 2. ASTM C990 – Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants.
 3. ASTM F593 – Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs.

1.4 SUBMITTALS

- A. See Section 01330, Submittal Procedures: Requirements for submittals.

- B. Product Data: Submit manhole covers and riser rings construction, features, configuration, and dimensions.
- C. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

Confirm Qualification section referenced in paragraph "D" is accurate.

- D. Qualifications listed in paragraph 1.7, Qualifications.

1.5 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Record actual grade adjustment elevation of manhole.

1.6 QUALITY ASSURANCE

- A. Perform Work in accordance with City of Pittsburgh, Allegheny County, and Pennsylvania Department of Transportation (PENNDOT), and OWNER standards.

1.7 QUALIFICATIONS

- A. Installer: Company specializing in performing work of this section with minimum 3 years documented experience.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Accept materials on site in undamaged, unopened containers, bearing Manufacturer's original labels. Inspect for damage.
- B. Protect materials from damage by storage in secure location.

1.9 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

PART 2 PRODUCTS

2.1 MANHOLE FRAMES AND COVERS

- A. Conform to Section 02082, Public Manholes and Structures.

2.2 GRADE ADJUSTMENT RISERS

- A. Rubber Adjustment Riser (Adjustment of 3-inch total thickness and less):
 1. Flat or tapered.
 2. Circular or rectangular.
 3. Manufacturer:
 - a. Infra Riser by East Jordan.

- b. Pro-ring by Cretex.
 - c. Or Approved Equal.
- B. Reinforced Concrete Grade Adjustment Ring (Adjustment from 3-inch to 12-inch total thickness):
- 1. Non-tapered ring only.
 - 2. Design meets the requirements of ASTM C478.
 - 3. Minimum concrete compressive strength: 4,000 psi at 28 days.
 - 4. Free from cracks, voids, and other defects.
 - 5. Width to accommodate manhole frame and allow frame to fastened to the grade ring with a minimum of 2 bolts.
 - 6. Provide bolt holes to accommodate frame anchor bolts. No field drilling of holes shall be permitted.
 - 7. Inside diameter: To match manhole frame and cover.
 - 8. To minimize the number of joints, grade adjustment shall be made using the minimum number of grade adjustment rings possible.
- C. Adjustment by brick and mortar is prohibited.
- D. Accessories:
- 1. Joint Sealant: Polyurethane Joint Sealant/Adhesive conforming to ASTM C990.
 - 2. Bolts:
 - a. Stainless Steel, ASTM F593.
 - b. 3/4-inch Diameter.
 - c. Embedded Depth: 2-inch minimum.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify and locate manholes requiring grade adjustment.

3.2 EXISTING WORK

- A. Saw cut existing paving.
- B. Excavate.
- C. Clean manholes.
- D. Remove existing manhole frames and covers.
- E. Repair waterproofing.

3.3 RAISING MANHOLE FRAMES AND COVERS

Select ONE option in red text and delete the unused option for paragraph "A." (Final submittal should not have any red text or brackets.) Work Orders are typically only used for yearly IDIQ contracts.

- A. Locate and raise manholes to grade as indicated on [Drawings][Work Order].
1. Adjustment 12-inch or less:

Confirm reference in subparagraph "a." is accurate.

- a. Use materials listed in paragraph 2.2, Grade Adjustment Risers.
2. Adjustment greater than 12-inch:
 - a. For Pre-Cast Concrete Manholes:
 - 1) Remove top cone section of manhole.
 - 2) Install new pre-cast concrete manhole barrel section of appropriate length, conforming to Section 02082, Public Manholes and Structures.
 - 3) Reinstall or replace top cone section.
 - 4) Perform final (small) adjustment as necessary.
 - b. For Brick Manholes:

Select ONE option in red text and delete the unused option for subparagraphs "1)" and "2)." (Final submittal should not have any red text or brackets.) Standard details are typically only used for yearly IDIQ contracts. Delete references to details NOT included in the contract documents in paragraphs "1)" and "2)."

- 1) See [Drawings][Standard Detail MHT].
- 2) Adjustments greater than 4-foot in depth shall be approved by the OWNER and conform to [Drawings][Standard Detail MHT].

- B. Use flat or tapered rubber manhole rings to achieve elevation indicated for frame and cover.
- C. Do not adjust elevation more than 3-inches with rubber manhole rings.
- D. Apply two, 1/2-inch continuous beads of sealant between manhole, grade rings, and frame.
- E. Reinstall removed manhole frame and cover.

3.4 REPLACING MANHOLE FRAMES AND COVERS

- A. Remove existing manhole frames and covers to enable reuse.
- B. Deliver removed manhole frames and covers to OWNER as maintenance materials.

Select ONE option in red text and delete the unused option for paragraph "C". (Final submittal should not have any red text or brackets.) Work Orders are typically only used for yearly IDIQ contracts.

- C. Install new frames and covers for manholes as indicated on [Drawings][Work Order]. Adjust to match finished grade as indicated on [Drawings][Work Order]. Seal joints between manholes and manhole frames. Apply two, 1/2-inch continuous beads of sealant between manhole, grade rings, and frame.

3.5 PAVING RESTORATION

Select ONE option in red text and delete the unused option for paragraph "A." (Final submittal should not have any red text or brackets.) Standard details are typically only used for yearly IDIQ contracts.

- A. Restore paving areas in accordance Section 02740, Asphalt Pavement and Section 02750, Concrete Pavement and applicable [Drawings][Standard Details].

END OF SECTION

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SECTION 02539

PUBLIC SANITARY AND STORM SEWER PIPING

Revision Log

Revision Date	Part	Revision
9/27/2023	1.4.B	Removed "Roadway Opening" permit.

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Sewer pipe and fittings.
2. Underground pipe markers.
3. Connection to existing manholes.
4. Manholes, Catch Basins, and Inlets.
5. Wye branches and tees.
6. Laterals.
7. Bedding and cover materials.

Delete specification sections listed in paragraph "B." that are NOT included in the contract documents. The following sections must be included (unless references in this specification are rephrased): Section 02324, Trenching, Backfilling, and Compaction, Section 02082, Public Manholes and Structures, Section 02951, TV Inspection of Sewer Pipelines, and Section 03300, Cast-In-Place Concrete.

B. Related Sections:

1. Section 02060 – Aggregates for Earthwork
2. Section 02082 – Public Manholes and Structures
3. Section 02324 – Trenching, Backfilling, and Compaction
4. Section 02951 – TV Inspection of Sewer Pipelines
5. Section 02952 – Sewer and Manhole Testing
6. Section 03300 – Cast-In-Place Concrete

1.2 MEASUREMENT AND PAYMENT

- A. See Section 01200 Price and Payment Procedures.

1.3 REFERENCES

A. ASTM International (ASTM):

1. ASTM C12 – Standard Practice for Installing Vitrified Clay Pipe Lines.
2. ASTM C76 – Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.
3. ASTM C425 – Standard Specification for Compression Joints for Vitrified Clay Pipe and Fittings.

4. ASTM C443 – Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets.
 5. ASTM C700 – Standard Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated.
 6. ASTM C923 – Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structure, Pipes, and Laterals.
 7. ASTM D2412 – Standard Test Method for Determination of External Loading Characteristic of Plastic Pipe by Parallel-Plate Loading.
 8. ASTM D3034 – Standard Specification for Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings.
 9. ASTM D3212 – Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.
 10. ASTM F477 – Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
 11. ASTM F679 – Standard Specification for Poly (Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings.
- B. American Water Works Association (AWWA):
1. AWWA C105 – American National Standard for Polyethylene Encasement for Ductile-Iron Pipe Systems.
 2. AWWA C110 – American National Standard for Ductile-Iron and Grey-Iron Fittings, 3 in. through 48 in. (75 mm through 1200 mm), for Water and Other Liquids.
 3. AWWA C111 – American National Standard for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
 4. AWWA C150 – ANSI Standard for the Thickness Design of Ductile Iron Pipe.
 5. AWWA C151 – American National Standard for Ductile-Iron Pipe, Centrifugally Cast, for Water.
 6. AWWA C153 – American National Standard for Ductile-Iron Compact Fittings for Water Service.

1.4 SUBMITTALS

- A. See Section 01330, Submittal Procedures: Requirements for submittals.
- B. Permits: Submit two copies of the soil erosion permit.
- C. Product Data: Submit catalog cuts and other pertinent data indicating proposed materials, accessories, details, and construction information.
- D. Submit reports indicating field tests made and results obtained.
- E. Manufacturer's Installation Instructions:
 1. Indicate special procedures required to install Products specified.
 2. Submit detailed description of procedures for connecting new sewer to existing sewer line.
- F. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.5 CLOSEOUT SUBMITTALS

- A. See Section 01700, Execution Requirements: Requirements for submittals.
- B. Project Record Documents: Record location of pipe runs, connections, manholes, cleanouts, and invert elevations.
- C. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

1.6 QUALITY ASSURANCE

- A. Pipe Markings All pipe shall be marked immediately after manufacture as follows:
 - 1. Diameter, Pipe Class, and Wall.
 - 2. Date of Manufacture.
 - 3. Name of Trademark of Manufacturer.
 - 4. Test Method prior to shipment (Air, Water, or Vacuum).
- B. Perform Work in accordance with the more stringent requirements of the City of Pittsburgh, Allegheny County, PennDOT, and the OWNER.

1.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

1.8 PRE-INSTALLATION MEETINGS

- A. Review the OWNER's Sewer Inspection Reports (TV), if they exist, to verify the location of existing sewer wyes.
- B. See Section 01300, Administrative Requirements: Pre-installation meeting.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Section 01600, Product Requirements: Requirements for transporting, handling, storing, and protecting products.
- B. Block individual and stockpiled pipe lengths to prevent moving.
- C. Materials shall not be placed on private property without the written permission of the property owner. Pipe may be strung along the pipe alignment route where approved by the OWNER.
- D. Pipe and fittings shall not be dropped.
- E. Take necessary measures to prevent damage to the exterior surface or internal lining of the pipe.
- F. Do not stack pipe higher than recommended by the pipe manufacturer.

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- G. Gaskets for mechanical and push-on joints shall be stored in a cool, dry location out of direct sunlight, and not in contact with petroleum products.

1.10 FIELD MEASUREMENTS

- A. Verify field measurements and elevations are as indicated.

1.11 COORDINATION

- A. See Section 01300, Administrative Requirements: Requirements for coordination.
 B. Comply with PA One Call Requirements.

PART 2 PRODUCTS

2.1 SEWER PIPE AND FITTINGS

Delete pipe materials not included in the contract.

Revise pressure class listed in paragraph "A" and subparagraph "7." to meet design criteria.

- A. Ductile Iron Pipe: AWWA C150 or AWWA C151, minimum pressure class 52, bell and spigot ends. Thickness Class greater than Class 52 shall be used as per the OWNER or Drawings.
1. Manufacturers:
 - a. Tyton Joint Pipe by U.S. Pipe.
 - b. Tyton Joint Pipe by McWane Ductile.
 - c. Or Approved Equal.
 2. Outside Coating (Pipe/Fittings): AWWA C151, asphaltic coating, 1 mil uniform thickness.
 3. Internal lining (Pipe/Fittings): Novolac Epoxy Coating:
 - a. Protecto 401 Ceramic Epoxy Coating.
 - b. Or Approved Equal.
 4. Manufacturer's facility must perform all lining application.
 5. The Epoxy Coating shall have a light resistance value of at least 40% to aid in the in-situ inspection of the pipe with video equipment.
 6. Polyethylene encasement: AWWA C105.
 7. Fittings: AWWA C153 or AWWA C110, ductile iron, Class 52 or above.
 8. Coat pipe and fittings per manufacturer's instructions.
 9. Mechanical Joints: AWWA C111, rubber gasket joint devices.
 10. When transitioning to different pipe material, appropriate flexible coupling will be used to maintain a watertight seal.
- B. Reinforced Concrete Pipe: ASTM C76, Class IV with Wall Type B reinforcement, bell and spigot ends.
1. Fittings: Reinforced concrete.
 2. Joints: ASTM C443, rubber compression gasket positioned on a single off-set profile groove or confined in preformed rectangular groove.
 - a. Profile Gasket
 - b. O-Ring Gasket

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3. Absorption: 5.5 percent Maximum.
 4. Density not less than 155 pounds per cubic foot using limestone aggregate and Type II cement.
 5. Limestone aggregate is required for sanitary and combination sewer installations.
 6. Reinforced with cages of circumferential and longitudinal steel.
 7. Pipe shall be furnished in minimum 8-foot lengths.
 8. Joint assemblies shall be so formed and accurately manufactured that when the pipes are drawn together the pipe shall form a continuous watertight conduit with a smooth and uniform interior surface.
 9. The rubber gasket shall be the sole element of the joint depended upon to provide a watertight seal conforming to ASTM C443. Pipe shall be subject to rejection because of failure to conform to any of the specification requirements.
 10. When transitioning to different pipe material, appropriate flexible coupling will be used to maintain a watertight seal.
- C. Plastic Pipe: ASTM D3034, SDR 26, Poly (Vinyl Chloride) (PVC) material; 4-inch through 15-inch diameter; bell and spigot style rubber ring sealed gasket joint.
1. Joints: ASTM F477 and shall meet ASTM D3212.
 2. The pipe stiffness shall be in accordance with ASTM D2412.
 3. Fittings: PVC.
 4. CONTRACTOR shall use elastomeric waterstops or gaskets to couple all PVC Pipes to concrete structures.
 5. Installation of couplings shall conform to the applicable sections of ASTM C923.
 6. When transitioning to different pipe material, appropriate flexible coupling will be used to maintain a watertight seal.
- D. Plastic Pipe: ASTM F679, PS 115, PVC material; 18-inch through 36-inch diameter; bell and spigot style rubber ring sealed gasket joint.
1. Joints: ASTM F477 and shall meet ASTM D3212.
 2. Fittings: PVC.
 3. CONTRACTOR shall use elastomeric waterstops or gaskets to couple all PVC Pipes to concrete structures.
 4. Installation of couplings shall conform to the applicable sections of ASTM C923.
 5. When transitioning to different pipe material, appropriate flexible coupling will be used to maintain a watertight seal.
- E. Vitrified Clay Pipe: ASTM C700, Extra Strength with Compression Joints, bell and spigot conforming to ASTM C425.
1. Fittings: Vitrified Clay, Extra Strength.
 2. Joints: O-Ring conforming to ASTM C12.

Use of HDPE MUST be approved by PWSA prior to incorporation into the Contract Documents and is only permissible in stormwater projects. Delete for all wastewater projects.

- F. High-Density Polyethylene (HDPE) Pipe: 12-inch through 36-inch diameter.
1. Pipe: Type S (outer corrugated wall with smooth inner liner) meeting the requirements of AASHTO M294 and ASTM F2306.
 2. Joints: ASTM F477 and shall meet ASTM D3212.

3. Fittings: HDPE conforming to ASTM F2306.
4. Plain end pipe and fittings connections shall be joined with coupling bands covering at least two full corrugations on each end of the pipe. Gasketed soil-tight coupling band connections shall incorporate a closed-cell synthetic expanded rubber gasket meeting the requirements of ASTM D1056 Grade 2A2. Gaskets, when applicable, shall be installed by the pipe manufacturer.
5. CONTRACTOR shall use elastomeric waterstops or gaskets to couple all HDPE Pipes to concrete structures.
6. When transitioning to different pipe material, appropriate flexible coupling will be used to maintain a watertight seal.

2.2 FLEXIBLE COUPLINGS

A. Manufacturers:

1. Fernco Model.
 - a. 1001 Series - Vitrified Clay to Vitrified Clay.
 - b. 1002 Series - Vitrified Clay to PVC.
 - c. 1003 Series - Vitrified Clay to Ductile Iron.
 - d. 1004 Series - Reinforced Concrete to Reinforced Concrete.
 - e. 1006 Series - Reinforced Concrete to PVC.
 - f. 1051 Series - Ductile Iron to PVC.
 - g. 1055 Series - Ductile Iron to Ductile Iron.
 - h. 1056 Series - PVC to PVC.
2. Flex-Seal by Mission Rubber.
3. Or Approved Equal.

2.3 SHIELDED COUPLINGS

A. Stainless Steel Shear Rings

B. Manufacturers:

1. Fernco Models.
2. Mission Rubber.
3. Or Approved Equal.

2.4 CONCRETE ENCASEMENT AND CRADLES

- A. Concrete: Conforming to Section 03300, Cast-In-Place Concrete, 4000 psi, 28-day concrete.
- B. Concrete Reinforcement: Conform to Section 03300, Cast-In-Place Concrete and Standard Details.

2.5 UNDERGROUND PIPE MARKERS

- A. Electronically locatable brightly colored plastic ribbon tape, displaying the continuously printed "SEWER" notation, minimum 6-inches wide, 4 mil thick, manufactured for direct burial service.
- B. Tape shall be laid between backfilling lifts over the pipe not less than 2-feet above the pipe and not less than 4-feet below the finished ground surface.

2.6 INSERTABLE LATERAL CONNECTIONS

A. Wye or Tee Connections

1. Rubber Sleeve and Gasketed PVC Hub, conforming to ASTM F477.
2. Manufacturer List:
 - a. Inserta Tee or Inserta Wye.
 - b. Harco.
 - c. Or Approved Equal.

2.7 MANHOLES

- A. Conform to Section 02082, Public Manholes and Structures.

2.8 BEDDING AND BACKFILL MATERIALS

- A. Bedding and backfill materials shall conform to Section 02324, Trenching, Backfilling, and Compaction.

2.9 ACCESSORIES

- A. Grout: Conform to Section 03600, Grout.

PART 3 EXECUTION

3.1 EXAMINATION

- A. See Section 01300, Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify trench cut is ready to receive Work.

3.2 PREPARATION

- A. Continuous water and sewer service shall be maintained throughout the job. CONTRACTOR shall furnish and install temporary cuts and plugs of existing pipes as necessary to maintain said service.
- B. Correct over excavation in accordance with Section 02324, Trenching, Backfilling, and Compaction.
- C. Remove large stones or other hard matter capable of damaging pipe or impeding consistent backfilling or compaction.
- D. Protect and support existing sewer lines, utilities, and appurtenances.
- E. Maintain profiles of utilities. Coordinate with other utilities to eliminate interference. Notify OWNER where crossing conflicts occur.

3.3 BEDDING

- A. Excavate pipe trench in accordance with Section 02324, Trenching, Backfilling, and Compaction.

Select ONE option in red text and delete the unused option for paragraph "B." Final submittal should not have any red text or brackets.

- B. Excavate to lines and grades shown on [Drawings][Standard Details] or required to accommodate installation of encasement.
- C. Dewater excavations to maintain dry conditions and preserve final grades at bottom of excavation.
- D. Provide sheeting and shoring in accordance with Section 02324, Trenching, Backfilling, and Compaction.
- E. Place bedding material in accordance with Section 02324, Trenching, Backfilling, and Compaction.

3.4 INSTALLATION – PIPE

- A. Unless otherwise approved by the OWNER in writing, pipe laying shall be performed only in the presence of the OWNER, and the CONTRACTOR shall give 24-hour notice of scheduled pipe laying operations to the OWNER.

Select ONE option in red text and delete the unused option for paragraph "B." Final submittal should not have any red text or brackets.

- B. All pipe shall be installed to the lines and grades shown on the [Drawings][Work Orders] or as directed by the OWNER. CONTRACTOR shall furnish labor, material, and surveying instruments and tools to establish and maintain all lines and grades from the control points furnished by the OWNER.
- C. Grade and alignment of the pipe shall be maintained by the use of laser beams or other methods acceptable to the OWNER.
- D. Blocking will not be permitted except where the pipe is to be encased in concrete.
- E. The grade shown on the profile is that of the invert of the pipe. Work not in compliance with these grades will be rejected and shall be corrected by the CONTRACTOR at CONTRACTOR's expense in a manner acceptable to the OWNER.
- F. The pipe shall not be driven down to grade by striking it with a shovel handle, timber, rammer, or other unyielding object.
- G. Pipe laying shall proceed upgrade with hubs up-grade and spigot ends fully entered into hubs. Each section of pipe shall rest upon the pipe bed for the full length of its barrel with recesses

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- excavated to accommodate bells and joints to form a continuous and uniform line without projections, indentations, offsets, or irregularities of any kind.
- H. Backfill material shall be placed and compacted between the pipe and the sides of the trench to hold the pipe in correct alignment. Backfill shall be placed to avoid damage to the pipe. Any pipe that has its grades or joints disturbed after laying shall be removed and re-laid.
- I. Walking or working on the completed pipe line, except as may be necessary in backfilling or tamping, shall not be permitted until the trench has been backfilled to a height of at least 2-feet over the top of the pipes.
- J. Any defective pipe or fitting found in the line shall be removed and replaced without cost to the OWNER.
- K. The interior and ends of all pipe shall be thoroughly cleaned during laying operations by means of plugs or other approved methods.
- L. Under no circumstances shall pipe be laid in water and no pipe shall be laid when trench conditions or the weather is unsuitable for such work except by permission of the OWNER.
- M. If deemed necessary by the OWNER, pipes will be tested for leakage between manholes as the work progresses.
- N. All pipes shall be joined in strict conformance with the Manufacturer's written specifications.
- O. Each section of pipe shall be cleaned and inspected before joining. Assembly shall provide tight, flexible joints that permit movement caused by expansion, contraction, and ground movement.
- P. If unusual joining resistance is encountered or if the pipe cannot be fully inserted into the bell, the CONTRACTOR shall disassemble the joint, inspect it for damage, re-clean or replace the joint components, and reassemble the joint.
- Q. At all times when piping installation is not actually in progress, the open ends in place of piping shall be closed by temporary plugs or by other approved means.
- R. If water is in the trench when work is resumed, the plug shall not be removed until all danger of earth or other materials from entering the pipe has passed.
- S. The connection to the existing sewers shall be protected in such a manner to prevent water, dirt, or debris from entering the existing system at any time during construction.
- T. Take all necessary precautions to prevent flotation of the pipe from trench flooding.

Select ONE option in red text and delete the unused option for paragraphs "U.", "V.", and "W." Final submittal should not have any red text or brackets.

- U. Where indicated on the [Drawings][Work Orders] or required by the OWNER, piping shall be placed on a concrete cradle, or concrete shall be placed around pipes for anchors, bedding, and encasement.

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- V. Concrete anchors or cradles shall consist of structures composed of concrete built-in trenches to support pipes and to the dimensions shown on the [Drawings][Standard Detail], or as furnished by the OWNER. In all cases, water shall be kept out of the trench until the concrete encasement or cradle, where used, has hardened or until the pipe sidefills have been placed.
- W. Concrete bedding and encasement shall be composed of concrete placed in trenches without forms as pipe bedding, or encased around pipes, to the dimensions and in the locations designated by the OWNER or indicated on the [Drawings][Work Orders].

3.5 INSTALLATION - CONNECTION TO EXISTING MANHOLE/STRUCTURE

- A. Core drill existing manhole/structure to clean opening. Using pneumatic hammers, chipping guns, sledgehammers, etc. is not permitted.
- B. Install watertight neoprene gasket and seal with non-shrink concrete grout.
- C. Prevent construction debris from entering existing sewer line when making connection.

3.6 INSTALLATION – MANHOLES

- A. Install in accordance with Section 02082, Public Manholes and Structures.

3.7 INSTALLATION - WYE BRANCHES AND TEES

Select ONE option in red text and delete the unused option for paragraph “A.” and “H.” Final submittal should not have any red text or brackets.

- A. Wye branches shall be installed at the locations indicated by the [Drawings][Work Orders].
- B. Maintain minimum 5-foot separation distance between wye connection and manhole.
- C. Supply the appropriate size wyes for all lateral connections/reconnections and/or core each lateral to correct size. Unless otherwise directed connections to main sewers will be made with commercially manufactured wye branches and 1/8 bends.
- D. When tapping into an existing pipeline, provide approved saddle wye or tee with stainless steel clamps or core drill the pipe and install watertight approved resilient boot insertable lateral connection. Mount saddles shall then be mounted with solvent cement or gasket and then secured with metal bands.
- E. Holes shall be laid out with a template and then cut with a mechanical hole cutter.
- F. Use standard fittings of the same material and joint type as the pipeline into which they are installed.
- G. Cutting of pipe will not be permitted except in special cases approved by the OWNER.
- H. Unless otherwise directed, wye branches will be installed as shown on [Drawings][Standard Detail]with the branch turned approximately 45 degrees from the horizontal.

3.8 INSTALLATION - LATERALS

- A. Service connections shall be laid and joined in every respect in the same manner specified for installation of pipe and fittings. All sewer service connections shall have a hub-end and be closed with pipe caps as specified.
- B. Termination elevation of all service connections will be determined by the elevation of the service sewer to be connected unless approved by the OWNER.
- C. If a transition in sewer lateral pipe must be made during the reconnection of service connections, an approved flexible type coupling or donut, and sealers must be installed. Costs for furnishing and installing the couplings and sealers shall be included in the sewer lateral unit price bid.
- D. The ends of all service connection trenches shall not be backfilled until the elevation and location of the service connection has been inspected and approved by the OWNER.
- E. Remove by drilling and wedging or some other approved method other than blasting any rock encountered in service connection trenches within 25-feet of any building. Rock shall be removed to a point not less than 5-feet beyond the end of the lateral installation.
- F. Where the depth of the main pipeline warrants, riser type laterals shall be constructed from the wye branch.
- G. Maintain minimum 5-foot separation distance between laterals.
- H. Install watertight plug, braced to withstand pipeline test pressure thrust, at termination of lateral. Install a 2-inch by 2-inch temporary marker stake extending from end of lateral to 12-inches above finished grade. Paint top 6-inches of stake with fluorescent green paint.

3.9 BACKFILLING

- A. Backfill around sides and to top of pipe in accordance with Section 02324, Trenching, Backfilling, and Compaction.
- B. Maintain optimum moisture content of bedding material to attain required compaction density per Section 02324, Trenching, Backfilling, and Compaction.

3.10 FIELD QUALITY CONTROL

Delete non-applicable tests, with the exception of Post Construction Television Inspection and Compaction Testing. Note: The Pressure Test is required when all of the following criteria apply: (1) The sewer segment starts and ends at a manhole. (2) The sewer conveys sanitary or combined sewage flow. The Deflection Test is only required for plastic sewer pipe.

- A. See Section 01400 - Quality Requirements and 01700, Execution Requirements.
- B. Pressure Test: Test in accordance with Section 02952, Sewer and Manhole Testing.
- C. Infiltration Test: Test in accordance with Section 02952, Sewer and Manhole Testing.

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- D. Deflection Test: Test in accordance with Section 02952, Sewer and Manhole Testing.
- E. Post Construction Television Inspection: Televisive in accordance with Section 02951, TV Inspection of Sewer Pipelines.
- F. Request inspection prior to and immediately after placing bedding.
- G. Compaction Testing: In accordance with Section 02324, Trenching, Backfilling, and Compaction.
- H. When tests indicate Work does not meet specified requirements, remove work, replace, and retest.
- I. Frequency of Compaction Tests: In accordance with Section 02324, Trenching, Backfilling, and Compaction.

3.11 PROTECTION OF FINISHED WORK

- A. See Section 01700 - Execution Requirements: Requirements for protecting finished Work.
- B. Protect pipe and aggregate cover from damage or displacement until backfilling operation is in progress.

END OF SECTION

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SECTION 02630
 STORM DRAINAGE

Revision Log

Revision Date	Part	Revision

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Cleanouts.
2. Inlets.
3. Catch Basins.
4. Water Quality Inserts.

Delete specification sections listed in paragraph "B." that are NOT included in the contract documents. The following sections must be included in the contract documents (unless references in this specification are rephrased): Section 01510, Bypass Pumping, Section 02230, Site Clearing, Section 02281, Manhole and Catch Basin Grade Adjustment, Section 02324, Trenching, Backfilling, and Compaction, Section 02082, Public Manholes and Structures, Section 02750, Concrete Pavement, Section 03300, Cast-In-Place Concrete, and Section 03600, Grout.

B. Related Sections:

1. Section 02060 – Aggregates for Earthwork
2. Section 02230 – Site Clearing
3. Section 02281 – Manhole and Catch Basin Grade Adjustment
4. Section 02324 – Trenching, Backfilling, and Compaction
5. Section 02539 – Public Sanitary and Storm Sewer Piping
6. Section 02952 – Sewer and Manhole Testing
7. Section 02750 – Concrete Pavement
8. Section 03300 – Cast-In-Place Concrete
9. Section 03600 – Grout

1.2 MEASUREMENT AND PAYMENT

- A. See Section 01200 – Price and Payment Procedures.

1.3 REFERENCES

- A. American Association of State Highway Transportation Officials (AASHTO):
1. AASHTO M306 – Drainage Structure Castings.

- B. American Concrete Institute (ACI):
 - 1. ACI 530/530.1 – Building Code Requirements and Specification for Masonry Structures and Companion Commentaries.
- C. ASTM International (ASTM):
 - 1. ASTM A48/A48M – Standard Specification for Gray Iron Castings.
 - 2. ASTM A123/A123M – Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - 3. ASTM C76 – Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.
 - 4. ASTM C361 – Standard Specification for Reinforced Concrete Low-Head Pressure Pipe.
 - 5. ASTM C443 – Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
 - 6. ASTM C478 – Standard Specification for Precast Reinforced Concrete Manhole Sections.
 - 7. ASTM C497 – Standard Test Methods for Concrete Pipe, Manhole Sections, or Tile.
 - 8. ASTM C913 – Standard Specification for Precast Concrete Water and Wastewater Structures.
 - 9. ASTM C923 – Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes and Laterals.

1.4 SUBMITTALS

- A. Section 01330, Submittal Procedures: Requirements for submittals.
- B. Shop Drawings: Indicate structure locations.
- C. Product Data: Submit frames and grates, component construction, features, configuration, dimensions.

Confirm Qualification section referenced in paragraph “D” is accurate.

- D. Qualifications listed in paragraph 1.6.
- E. Manufacturer’s installation instructions and certificate for water quality inserts.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with the more stringent requirements of the City of Pittsburgh, Allegheny County, Pennsylvania Department of Transportation (PennDOT), and the OWNER.
- B. Shop Inspection:
 - 1. All materials furnished by the CONTRACTOR shall be certified by the supplier for compliance with the pertinent specifications. Shop inspections and testing may be required. The cost of shop testing shall be borne by the supplier or the CONTRACTOR.
- C. Field Inspection:
 - 1. All materials furnished shall be tested for defects in material and/or workmanship in the manner specified and in the presence of and as approved by the OWNER.

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2. Verify that received water quality inserts will fit the catch basin and inlets.
- D. Source Quality Control:
1. Maintain uniform quality of products and component compatibility by using the products of one manufacturer in the case of precast reinforced concrete catch basins and inlets.
 2. Obtain certificate of construction compliance with ASTM C478 from the precast reinforced concrete catch basin and inlet manufacturer.
 3. Obtain sworn certification from manufacturer that structures were constructed using Type II Portland cement. No payment for catch basins or inlets will be approved until such certificate has been submitted.
 4. Obtain certificate of material compliance with ASTM A48, Class 30 tensile strength from the frame, grate, and casting manufacturer. Furnish certification that tensile test bars were from same pour as castings.
 5. Obtain certification from manufacturer that all components meet or exceed AASHTO HS-20 highway loading requirements.
 6. Sections shall be steam cured and shall not be shipped until at least five days after having been cast.

Select ONE option in red text and delete the unused option for subparagraph “7.” Final submittal should not have any red text or brackets.

7. Mark inside of each precast structure by indentation or waterproof paint showing date of manufacture, manufacturer, and identifying symbols and numbers shown on [Drawings][Work Order] to indicate its intended use.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum 3 years documented experience.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Comply with Section 01600, Product Requirements: Product storage and handling requirements.
- B. Comply with precast concrete manufacturer’s instructions and ASTM C913 for unloading, storing, and moving precast structures.
- C. Store precast concrete catch basins and inlets to prevent damage to OWNER’s property or other public or private property. Repair property damaged at CONTRACTOR’s expense.
- D. Store water quality inserts in a cool, dry location out of direct sunlight and not in contact with petroleum products.

1.8 ENVIRONMENTAL REQUIREMENTS

- A. See Section 01600, Product Requirements.
- B. Cold Weather Requirements: ACI 530/530.1.

- C. In no instance set or construct catch basin or inlet bases on subgrade containing frost.
- D. To improve workability of Preformed Plastic Sealing Compound during cold weather, store such at temperature above 70 degrees Fahrenheit or artificially warm compound in a manner satisfactory to the OWNER.

PART 2 PRODUCTS

2.1 GENERAL

- A. Catch Basins and inlets shall consist either of precast or poured in-place concrete box, cast iron frame and bicycle safe grate, all necessary risers, and cast iron curb inlet casting (Type 13 Modified only).

2.2 MANHOLE FRAMES AND COVERS

- A. Conform to Section 02082, Public Manholes and Structures.

2.3 STORMWATER INLET AND CATCH BASIN STRUCTURES

- A. Catch Basin and Inlet Structure Sections:
 1. Concrete shall be minimum 4,000 psi at 28-days.
 - a. Class AA.
 - b. Or Approved Equal.
 2. H-20 Live Load Rating
 3. Reinforced precast concrete shall be in accordance with ASTM C478 with gaskets in accordance with ASTM C923.
 4. Wall Thickness: 8-inch (Reinforced Concrete), 12-inch (Non-Reinforced Concrete)
 - a. Vertical Rebar - #6 Rebar, 6-inch center to center.
 - b. Horizontal Rebar - #4 Rebar, 12-inch center to center.
 5. Base Thickness: 8-inch (Reinforced Concrete), 12-inch (Non-Reinforced Concrete)
 - a. Rebar - #4 Rebar, 12-inch center to center.
 6. Aggregate Base: For precast only, compacted, 12-inch thick.

Select ONE option in red text and delete the unused option for subparagraph "7." Final submittal should not have any red text or brackets. Standard details are typically only used for yearly IDIQ contracts. Delete references to details NOT included in the contract (e.g. CB5 and SI5 are not typically specified.)

7. Dimensions per [Drawings][Standard Details CB5, CB13, CB9N10, CB13M, SI5, SI9N10, SI13, SI13M].
 8. Invert: 20-inch above the bottom of the structure.
- B. Hook and Trap for Catch Basins:
 1. Hook:
 - a. East Jordan EJIW 5954.
 - b. Neenah Foundry R-3705
 - c. Or Approved Equal.
 2. Trap:

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- a. East Jordan EJIW 5944.
 - b. Neenah Foundry R-3701
 - c. Or Approved Equal.
3. Bottom of Hook and Trap to be 16-inch above the bottom of the structure.

2.4 CATCH BASIN FRAME AND GRATE

- A. Cast Iron, conforming to ASTM A48.
1. Class 30 Minimum Strength.
 2. Cast Iron or Gray Iron.
- B. Manufacturers:
1. Frame: Numbers to be Verified
 - a. East Jordan Iron Works:
 - 1) EJIW 5357 (3-Flange) – Type 13 & Type 13 Modified.
 - 2) EJIW 5357 (4-Flange) – Type 9.
 - b. Neenah Foundry:
 - 1) NF – 35720002/35722304 (3-Flange) – Type 13 & Type 13 Modified.
 - 2) NF - 35720001 (4-Flange) – Type 9.
 - c. Or Approved Equal.
 2. Grate: Numbers to be Verified
 - a. East Jordan:
 - 1) EJIW 5355M8 - All Catch Basins.
 - b. Neenah Foundry:
 - 1) NF – 35743000.
 - c. Or Approved Equal.

2.5 WATER QUALITY INSERTS

- A. Bag Type Inlet Filter Inserts
1. Corrosion resistant frame and replicable bag designed to fit standard inlet and/or catch basin castings. Specified type shall be per [Drawings][Work Order],
 - a. Manufacturers:
 - 1) Flexstorm Pure with PC or PC+ bag by Advance Drainage Systems.
 - 2) Stormsack by Fabco Industries Inc.
 - 3) Or Approved Equal.
- B. Cartridge Type Inlet Filter Inserts
1. Corrosion resistant frame and replicable bag designed to fit standard inlet and/or catch basin castings. Specified type and cartridge type(s) shall be per [Drawings][Work Order],
 - a. Manufacturers:
 - 1) Stormbasin by Fabco Industries Inc.
 - 2) Or Approved Equal.

2.6 BEDDING AND BACKFILL MATERIALS

- A. Bedding and Backfill Materials shall conform to Section 02324, Trenching, Backfilling, and Compaction.

PART 3 EXECUTION

3.1 EXAMINATION

- A. See Section 01300, Administrative Requirements: Verification of existing conditions before starting Work.
- B. Verify items provided by other sections of Work are properly sized and located.
- C. Verify built-in items are in proper location and ready for roughing into Work.
- D. Verify correct size of excavation.

3.2 PREPARATION

- A. Perform bypass pumping in accordance with Section 01510, Bypass Pumping.
- B. Coordinate placement of inlet and outlet pipe or duct sleeves required by other sections.
- C. A waterstop gasket and approved clamp assembly shall be installed around the pipe when entering and leaving a catch basin or inlet wall.
- D. Do not install catch basins or inlets where site conditions induce loads exceeding structural capacity of structures.
- E. Inspect precast structures immediately prior to placement in excavation to verify manholes and structures are internally clean and free from damage. Remove and replace damaged units.
- F. The excavation shall be properly dewatered while placing bedding material and pouring the concrete.

3.3 INSTALLATION - GENERAL

- A. Excavation and Backfill:
 - 1. Excavate for catch basins and inlets in accordance with Section 02324, Trenching, Backfilling, and Compaction. Provide clearance around sidewalls of catch basin and inlet for construction operations, granular backfill, and, if required, placement of geotextile filter fabric.
 - 2. When groundwater is encountered, prevent accumulation of water in excavations. Place structure in dry trench.

Select ONE option in red text and delete the unused option for paragraph "B." Final submittal should not have any red text or brackets.

- B. Set catch basins and inlets in the proper location at the invert elevations indicated on the [Drawings][Work Order] with rim at the proper elevation. Set structure plumb and true on aggregate base (compacted aggregate for pre-cast structures only). Under no condition remove a portion of the structure for adjustment purposes.

- C. Install catch basins and inlets in a manner to ensure watertight construction.
- D. Install catch basins and inlets to preclude sediment from any tributary areas from entering the structure until such areas have been stabilized.
- E. Place sections plumb and level, trim to correct elevations, and anchor to foundation slab, as applicable.
- F. Backfill excavations for structures in accordance with Section 02324, Trenching, Backfilling and Compaction.

3.4 PRECAST CONCRETE INLET AND CATCH BASIN INSTALLATION

- A. Lift precast inlet or catch basin at lifting points designated by Manufacturer.
- B. When lowering inlet or catch basin into excavations and joining pipe to units, take precautions to ensure interior of pipeline and structure remains clean.
- C. Set precast inlet or catch basin firmly and fully on 12-inches of compacted Type A1 crushed stone bedding, consolidated in accordance with provisions of Section 02324, Trenching, Backfilling, and Compaction.
- D. Remove foreign materials from joint surfaces and verify sealing materials are placed properly.
- E. Verify inlet or catch basin structures installed satisfy required alignment and grade.
- F. Remove knockouts without creating openings larger than required to receive pipe. Fill annular space in accordance with Section 03600, Grout.
- G. Cut pipe to finish flush with interior wall.
- H. Damaged curb shall be sawcut in accordance with Section 02230, Site Clearing.
- I. Form and replace damaged curb in accordance with Section 02750, Concrete Pavement.

3.5 CAST-IN-PLACE CONCRETE INLET AND CATCH BASIN INSTALLATION

- A. Prepare crushed stone bedding or other support system shown on Standard Details, to receive foundation slab as specified for precast manholes and structures.
- B. Erect and brace forms against movement in accordance with Section 03300, Cast-In-Place Concrete.

Select ONE option in red text and delete the unused option for paragraph "C." Final submittal should not have any red text or brackets. Standard details are typically only used for yearly IDIQ contracts.

- C. If CONTRACTOR elects to install an 8-inch wall thickness, install reinforcing steel as indicated on [Drawings][Standard Details] and in accordance with Section 03300, Cast-In-Place Concrete.

- D. Place and cure concrete in accordance with Section 03300, Cast-In-Place Concrete.
- E. Damaged curb shall be sawcut in accordance with Section 02230, Site Clearing.
- F. Form and replace damaged curb in accordance with Section 02750, Concrete Pavement.

3.6 CAST-IN-PLACE CONCRETE INLET AND CATCH BASIN WITH PRECAST CONCRETE BASE INSTALLATION

- A. Set precast base firmly and fully on 12-inches of compacted Type A1 crushed stone bedding, consolidated in accordance with provisions of Section 02324, Trenching, Backfilling, and Compaction.
- B. Erect and brace forms against movement in accordance with Section 03300, Cast-In-Place Concrete.

Select ONE option in red text and delete the unused option for paragraphs "C." and "D." Final submittal should not have any red text or brackets. Standard details are typically only used for yearly IDIQ contracts.

- C. If CONTRACTOR elects to install an 8-inch wall thickness, install reinforcing steel as indicated on [Drawings][Standard Details] and in accordance with Section 03300, Cast-In-Place Concrete.
- D. Install joint gaskets between precast base and cast-in-place sections in accordance with manufacturer's recommendations and [Drawings][Standard Details]. Lower, set level, and firmly position base section before placing or casting additional sections.
- E. Place and cure concrete in accordance with Section 03300, Cast-In-Place Concrete.
- F. Damaged curb shall be sawcut in accordance with Section 02230, Site Clearing.
- G. Form and replace damaged curb in accordance with Section 02750, Concrete Pavement.

3.7 FRAME, GRATE, AND CASTING INSTALLATION

- A. Frames shall be set into 2 rings of elastomeric sealant and secured with a minimum of 2, 3/4-inch Stainless Steel anchor bolts.
- B. Any casting set more than 3/16-inch above or below the finished surface of the adjoining concrete, brick, block, stone, or bituminous surface, as determined by a 10-foot straight edge, shall be reset by the CONTRACTOR and at the CONTRACTOR's expense.
- C. Provide for adjustment of frames using solid rubber composite or adjustable risers conforming to Section 02281, Manhole and Catch Basin Grade Adjustment, with a cement mortar or non-shrink grout to close the opening between the frame and structure.
- D. Set top of frame flush with the ordained (original) street grade. Provide for adjustment of grates to finished street grade using precast steel leveling rings.

3.8 WATER QUALITY INSERT INSTALLATION

- A. Remove the grate from the casting or drainage structures. Clean the ledge (lip) of the casting or drainage structure to ensure it is free of dirt and stone. Drop in the water quality filter insert through the clear opening and rest the suspension hangers firmly on the inside ledge (lip) of the casting or drainage structure. Replace the grate and confirm it is not elevated more than an 1/8-inch.
- B. For curb box inlet filters refer to the Manufacture's installation instructions.

3.9 FIELD QUALITY CONTROL

- A. See Section 01400, Quality Requirements.
- B. See Section 01700, Execution Requirements.
- C. Test cast-in-place concrete in accordance with Section 03300, Cast In-Place Concrete.

END OF SECTION

THE PITTSBURGH WATER AND SEWER AUTHORITY
CHARLES ANDERSON BRIDGE
PWSA Project No. TBD

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THE PITTSBURGH WATER AND SEWER AUTHORITY
 CHARLES ANDERSON BRIDGE
 PWSA Project No. TBD

SECTION 02870

STORMWATER INLET STRUCTURES

Revision Log

Revision Date	Part	Revision

PART 1 GENERAL

1.1 SUMMARY

Designer shall only include the items in Paragraph “A” that are applicable to the Project. If an item(s) are deleted, remove the applicable paragraphs in Part 2 and Part 3.

- A. Section Includes: Construction activities pertaining to inflow structures that typically direct drainage to surface stormwater features. The following items are included in this Section:
1. Curb Cuts.
 2. Concrete Aprons.
 3. Trench Drains and Grates.
 4. Junction Boxes.

Delete specification sections listed in paragraph “B.” that are NOT included in the contract documents. The following section must be included (unless references in this specification are rephrased): Section 03300, Cast-In-Place Concrete.

- B. Related Sections:
1. Section 02740 – Asphalt Paving
 2. Section 02750 – Concrete Paving
 3. Section 02800 – Stormwater Features
 4. Section 03300 – Cast-In-Place Concrete

1.2 MEASUREMENT AND PAYMENT

1. See Section 01200 – Price and Payment Procedures.

1.3 REFERENCES

- A. American Association of State Highway and Transportation Officials (AASHTO).
- B. American Concrete Institute (ACI):
1. ACI 318 – Building Code Requirements for Structural Concrete.
- C. American Society for Testing Materials (ASTM):
1. ASTM C39 - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.

- D. Pennsylvania Department of Transportation (PennDOT):
 - 1. PennDOT Specifications Publication 408, current edition.

1.4 SUBMITTALS

- A. Submit complete shop drawings and product information for all items to be furnished under this Section upon receipt of notice to proceed and prior to construction.
- B. Submit a list of materials to be provided for work under this Section including the name and address of the materials producer and the location from which the materials are to be obtained.
- C. Submit certificates, signed by the materials producer, stating that materials meet or exceed the specified requirements.

1.5 QUALITY ASSURANCE

- A. All materials, methods of construction, and workmanship shall conform to applicable requirements of ASTM, PTM, PennDOT Standard Specifications and AASHTO Standards, unless otherwise specified.
- B. Upon completion of relevant excavation work, and prior to placement of any materials under this section, subgrade shall be inspected by the CONSTRUCTION MANAGER. Survey or acceptable measurement by the CONTRACTOR shall verify the finished subgrade elevation in accordance with the Drawings.
- C. Upon completion of placement of surface stormwater features, and prior to backfilling or surface restoration, the structure shall be inspected by the CONSTRUCTION MANAGER. Survey or acceptable measurement by the CONTRACTOR shall verify the finished elevation(s) of all features in accordance with the Drawings.

PART 2 PRODUCTS

2.1 CONCRETE CURB CUTS

- A. All concrete to be used for curb cuts shall meet requirements in Section 03300, Cast-In-Place Concrete.
- B. All exposed concrete surfaces shall be finished to a smooth face unless otherwise specified. Air pockets, exposed lifting points, cracks, or other visible damage shall not be acceptable. All finished edges and corners shall be chamfered or rounded, typically 3/4-inch or as specified on the Drawings.
- C. Curb cut work shall include the embedment of a metal inlet frame as detailed on the Drawings, forming of a smooth transition from the metal frame to the new curb.

2.2 APRONS

- A. Aprons shall be cast-in-place concrete unless otherwise specified on the Drawings or approved by the OWNER.
- B. Aprons in the street shall not have slopes more than 15 percent and shall not extend more than 18-inches into the cartway. Concrete aprons shall have a minimum of an 8-inch base.
- C. All concrete to be used for concrete aprons shall meet requirements in Section 03300, Cast-In-Place Concrete.

2.3 TRENCH DRAIN CHANNEL, COVER, AND FRAME

- A. All trench grates installed in the footway shall be ADA and AASHTO H-20 compliant. All trench drain channels shall be cast-in-place concrete unless otherwise specified on the Drawings or approved by the OWNER.
- B. Bolted trench drain channel, cover, and frame shall be installed as indicated on the Drawings. Steel reinforcement for trench drain channels shall be installed as specified on the Drawings.
- C. Trench drain grates shall be installed with the pattern specified on the Drawings. If no specified product is indicated on the Drawings, the trench drain system shall be the Neenah R-4999 series or Approved Equal.
- D. All concrete to be used for trench drain channels shall meet requirements in Section 03300, Cast-In-Place Concrete.

2.4 JUNCTION BOXES

- A. All junction boxes shall be installed with standard PennDOT precast concrete inlet box (PennDOT RC-46M). The junction box frame and grate shall be rated for H-20 loading.
- B. Junction boxes shall include a 1/2-inch thick aluminum weir/orifice plate as shown on the Drawings.

PART 3 EXECUTION

3.1 GENERAL

- A. Positive drainage shall be provided to any stormwater curb cut, inlet opening, or other stormwater collection point. Any finished paving within the limits of the Contract that does not provide positive drainage to these, or similar collection points shall be repaired to the satisfaction of OWNER (up to and including full removal and replacement) by the CONTRACTOR at no additional expense to the OWNER. This shall include any paving settlement within the first year after completion of the Work that creates an impediment to positive drainage.

- B. Inlet testing shall be performed to ensure positive drainage to any stormwater curb cut, trench drain opening, or other stormwater collection point. Inlet testing shall be performed by temporarily unblocking the inlet and discharging 5 gallons of water to the inlet. CONTRACTOR shall ensure that the total volume of water discharged for testing enters the inlet and no water bypasses the inlet.
- C. Inlets, curb openings, trench drains, and other stormwater structures draining exclusively to a stormwater feature shall remain fully closed to runoff until approval of final site cleanup and stabilization by OWNER. This shall be accomplished using a plug in the outlet pipe, an impermeable seal across a curb opening, or other devices and methods as appropriate to keep all stormwater from entering the system.
 - 1. CONTRACTOR may install temporary cold-patch asphalt or sandbags on the upstream side of the curb cuts as a measure to restrict flow to stormwater features.
 - 2. CONTRACTOR may install silt socks on the downstream side of curb cuts to restrict flow. In instances where multiple curb cuts convey flow to a system, a contiguous length of silt sock may be used to restrict flow to all curb cuts.
 - 3. CONTRACTOR may install properly secured sheets of plywood or Styrofoam caulked to the downstream side of a curb cut to restrict flow.
- D. Proposed maintenance activities and schedule shall be coordinated with OWNER and shall be in accordance with the program submitted by the CONTRACTOR at the time of Provisional Acceptance.

3.2 INSTALLATION OF CONCRETE CURB CUTS AND APRONS

- A. Construct concrete curb cuts and aprons to the dimensions, shape, and workmanship as shown on the Drawings, or as otherwise directed by OWNER.
- B. Curb cuts shall have a width as shown on the Drawings and shall have a minimum drop of 2-inches from the projected gutter line.
- C. Construct or replace curbs to the dimensions, shape, and workmanship as the original curb, as shown on the Drawings, or as otherwise directed by OWNER. Construction methods shall be in accordance with PennDOT Publication 408, Section 630. Paving limits shall be as shown on the Drawings unless otherwise approved by OWNER.
- D. Installation of curbing shall be performed in a manner that does not compromise the integrity of any stormwater system. In no instance will it be acceptable to stake, pierce, or otherwise damage an installed or existing system to facilitate curb cut construction. It is suggested that all curbing be formed using top-clamped forms or slip forming methods, and all surveying grades be marked with taut lines spanning the underlying systems.
- E. Where curb is disturbed during construction outside of the allowable work areas shown on the Drawings or otherwise specified, restore in kind, to extent determined by OWNER, and to the satisfaction of the abutting property owners at no cost to OWNER.

- F. Where not otherwise directed to replace the existing curbing, or where not required to replace the existing curbing due to construction activities, CONTRACTOR shall maintain and support the existing curbing and footway as necessary during all construction activities.
- G. Within the limit of street reconstruction and within the limit of full width street resurfacing the CONTRACTOR shall be responsible for maintaining a minimum 3-inch curb opening to all open mouth style inlets. CONTRACTOR shall install concrete aprons at all curb opening stormwater collection points (inlets, lay-by inlets, trench drains, etc.) as shown on the Drawings, or the CONTRACTOR when necessary shall dish out the asphalt around the inlet opening, to accommodate the minimum 3-inch curb opening. This Work is incidental to paving items, and no separate or additional payment will be made for this Work.
- H. Prior to installation, the subgrade must be compacted and carefully graded such that the concrete apron slab will be seated flush on the subgrade, at the proper elevation and slope as shown on the Drawings.

3.3 INSTALLATION OF TRENCH DRAINS/GRATES

- A. Construct trench drains to the dimensions, shape, and workmanship as shown on the Drawings, or as otherwise directed by OWNER.
- B. Top of grate must be installed flush to 1/8-inches below finished grade. Bevel concrete to top of grate if below flush. Grate inflow areas shall be a minimum of 1/4 square feet per linear foot. The grate bars shall be transverse to the roadway and bicycle safe. Grates shall have openings no greater than 1/2-inch wide.
- C. CONTRACTOR may install temporary cold-patch asphalt upstream of each trench drain until Work is complete and flow can be directed into the rain garden.
- D. CONTRACTOR may install silt socks at the upstream and downstream end of each trench drain until Work is complete and flow can be directed into the rain garden.
- E. The use of Styrofoam and caulk to restrict flow into trench drains may be utilized only if approved by OWNER.

3.4 INSTALLATION OF JUNCTION BOXES

- A. Construct junction boxes to the dimensions, shape, and workmanship as shown in the Drawings, or as otherwise directed by OWNER.
- B. Pipe openings will be located to provide a minimum of 4-inches of concrete between inlet box and pipe opening.
- C. Height of inlet box shall be a minimum of 3 1/2-feet and a maximum of 8-feet.
- D. Minimum allowable cover for inlet and outlet piping is 2-feet.

THE PITTSBURGH WATER AND SEWER AUTHORITY
CHARLES ANDERSON BRIDGE
PWSA Project No. TBD

- E. Prior to installation, the subgrade must be compacted and carefully graded such that the junction box meets the proper elevation as shown on the Drawings.

END OF SECTION

THE PITTSBURGH WATER AND SEWER AUTHORITY
CHARLES ANDERSON BRIDGE
PWSA Project No. TBD

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EXHIBIT C
Construction Cost Estimate



CONSTRUCTION
COST ESTIMATE

for

Charles Anderson Bridge
PWSA Water and Sewer Items

MICHAEL BAKER JR., INC.
CONSULTING ENGINEERS

ITEM NO.	ITEM	UNIT	UNIT PRICE	QTY.	ITEM PRICE
SEWER					
9000-0207	GRADE ADJUST & REPLACE MANHOLE CASTING	EA	\$3,500.00	3	\$10,500
WATER					
9000-0208	REBUILD WATER VALVE BOX	EA	\$1,250.00	2	\$2,500
9000-0209	GRADE ADJUST WATER VALVE BOX	EA	\$250.00	10	\$2,500

SUBTOTAL \$15,500

TOTAL \$15,500



BOARD RESOLUTION ITEM

Originating
Department: Engineering and Construction Phone: 412.255.8800-2291
Department
Contact: Barry King E-mail: BKing@pgh2o.com
Date: 10.27.2023

Resolution No: 62

Approving entering into a Cost Share Agreement with DOMI for the Federally-Funded Charles Anderson Bridge Rehabilitation Project. Capital Budget \$15,500.00.

**FINAL BOARD APPROVAL:
ADOPTED OCTOBER 27, 2023**

Michael Domach

Michael Domach, Assistant Secretary



BOARD RESOLUTION REPORT

Resolution No:	62
DATE:	10.27.2023
TO:	PWSA Board of Directors
SUBJECT:	Approving entering into a Cost Share Agreement with DOMI for the Federally-Funded Charles Anderson Bridge Rehabilitation Project. Capital Budget \$15,500.00.

STATEMENT OF THE ISSUE:

The Board is asked to approve a cost share agreement with the City of Pittsburgh Department of Mobility and Infrastructure (DOMI) for their Charles Anderson Bridge Project. This project requires adjustments to PWSA water and sewer infrastructure on Panther Hollow Road, Boulevard of the Allies, Parkview Ave, and Dawson Street. DOMI's Project is funded through federal assistance via PennDOT, and they need agreements with affected utilities. These agreements require utilities to cover expenses for their infrastructure adjustments and improvements, except for Stormwater infrastructure, which is categorized as "drainage" and paid by the Project Owner.

For the Charles Anderson Bridge Project, the estimated total cost is \$221,195.00 for all PWSA utility adjustments and \$15,500 for water and sanitary work only. PWSA's contribution is \$15,500. This resolution authorizes the Chief Executive Officer to sign the Cost Share Agreement on behalf of PWSA with DOMI. It also seeks approval for the design review and construction inspection by our internal PWSA Engineering and Construction Staff.

PWSA will continue to inspect, manage, operate, and maintain any Stormwater infrastructure affected by this project, except for bridge drains and scuppers.

RECOMMENDED ACTION:

Approve entering into the Cost Share Agreement with the City of Pittsburgh Department of Mobility and Infrastructure (DOMI) for the Charles Anderson Bridge Rehabilitation Project as described, including authorizing the Chief Executive Officer to sign on behalf of the PWSA.

ALTERNATIVES:

Failure to enter into this Agreement may jeopardize DOMI's ability to secure their federal funding for the Charles Anderson Bridge Rehabilitation Project.

SUPPLIER DIVERSITY PROGRAM STATUS:

The work associated with this agreement (utility adjustments and replacements) will be addressed by DOMI's Contractor for this project. As such, PWSA's SDP is not applicable.



As far as DOMI's diversity supplier program status, note that as this project is dependent on a joint effort between City and Federal funding sources, DOMI will adhere to the City's and Federal Supplier Diversity Program, as implemented by PennDOT.

FINANCIAL IMPACT OF RECOMMENDATION:

Account Information	
Account:	Capital
Operating Department Code:	930 - Engineering
Operating Account Code:	7701 - Capital Projects Only
Total Amount Requested for Approval	\$15,500.00
Frequency of Expenditure	One-Time

DOCUMENTS ATTACHED:

N/A

FOR MORE INFORMATION:

Staff contact: Grunauer, Benjamin

E-mail: BGrunauer@pgh2o.com

LEGAL REVIEW: MONICA WALAAN 10.13.2023

FINANCE. REVIEW: KEVIN PAWLOS 10.12.2023

PROCUR. REVIEW: THORYN SIMPSON 10.13.2023

BY CHIEF EXECUTIVE OFFICER:
William J. Pickering 10.13.2023

AUTHORIZING
LEGISLATION



City of Pittsburgh

510 City-County Building
414 Grant Street
Pittsburgh, PA 15219

Legislation Details (With Text)

File #:	2023-1971	Version:	1
Type:	Resolution	Status:	Passed Finally
File created:	9/22/2023	In control:	Committee on Intergovernmental and Educational Affairs
On agenda:	9/26/2023	Final action:	10/3/2023
Enactment date:	10/3/2023	Enactment #:	651
Effective date:	10/8/2023		
Title:	Resolution providing for a Reimbursement Agreement or Agreements with the Pittsburgh Water and Sewer Authority (PWSA) for costs associated with the Charles Anderson Memorial Bridge project where PWSA would be responsible for paying 100% of the actual expenses involved in certain work to be described in the Agreement(s).		
Sponsors:			
Indexes:	AGREEMENTS		
Code sections:			
Attachments:	1. 2023-1971 Cover Letter Charles Anderson - PWSA PE Letter - signed, 2. Summary 2023-1971		

Date	Ver.	Action By	Action	Result
10/8/2023	1	Mayor	Signed by the Mayor	
10/3/2023	1	City Council	Passed Finally	Pass
9/27/2023	1	Standing Committee	Affirmatively Recommended	Pass
9/26/2023	1	City Council	Read and referred	
9/26/2023	1	City Council	Waived under Rule 8	Pass

Resolution providing for a Reimbursement Agreement or Agreements with the Pittsburgh Water and Sewer Authority (PWSA) for costs associated with the Charles Anderson Memorial Bridge project where PWSA would be responsible for paying 100% of the actual expenses involved in certain work to be described in the Agreement(s).

Be it resolved by the Council of the City of Pittsburgh as follows:

Section 1. The Mayor and the Director of the Department of Mobility and Infrastructure, on behalf of the City of Pittsburgh, are hereby authorized to enter into a Reimbursement Agreement or Agreements with the Pittsburgh Water and Sewer Authority (PWSA) for costs associated with the Charles Anderson Memorial Bridge project where PWSA would be responsible for paying 100% of the actual expenses involved in certain work to be described in the Reimbursement Agreement(s).

Funding for reimbursable utility work will be deposited to:

JDE JOB NO.	JDE FUND	BUDGET YEAR	SOURCE
6073810123	40114	2023	PWSA

File #: 2023-1971, **Version:** 1

ED GAINEY
MAYOR



KIMBERLY LUCAS
DIRECTOR

CITY OF PITTSBURGH
DEPARTMENT OF MOBILITY & INFRASTRUCTURE
CITY-COUNTY BUILDING

September 19th, 2023

President and Members of City Council
City of Pittsburgh

RE: PWSA Cost Share Agreement

Dear Members of City Council:

Enclosed is a proposed Resolution providing for an Agreement or Agreements with the Pittsburgh Water and Sewer Authority (PWSA) for costs associated with the Charles Anderson Memorial Bridge project where PWSA would be responsible for paying 100% of the actual expenses involved in certain work to be described in the Agreement(s).

A waiver of Rule 8 is requested to expedite entering into this agreement with Pittsburgh Water & Sewer Authority in an effort to move the Charles Anderson Bridge project into the construction phase as soon as possible.

Your favorable consideration of the attached proposed Resolution is hereby requested.

Sincerely,


Jeff Skalican (Sep 20, 2023 16:08 EDT)

Jeffrey Skalican
Acting Director

KL/JS/ewg

Charles Anderson - PWSA PE Letter

Final Audit Report

2023-09-20

Created:	2023-09-20
By:	Evan Gross (evan.gross@pittsburghpa.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAinlI4qimkvouqMUzJfCyDLxOqh4bDAxS

"Charles Anderson - PWSA PE Letter" History

-  Document created by Evan Gross (evan.gross@pittsburghpa.gov)
2023-09-20 - 7:59:11 PM GMT- IP address: 205.141.129.33
-  Document emailed to Jeff Skalican (jeff.skalican@pittsburghpa.gov) for signature
2023-09-20 - 7:59:30 PM GMT
-  Email viewed by Jeff Skalican (jeff.skalican@pittsburghpa.gov)
2023-09-20 - 8:08:45 PM GMT- IP address: 104.47.64.254
-  Document e-signed by Jeff Skalican (jeff.skalican@pittsburghpa.gov)
Signature Date: 2023-09-20 - 8:08:52 PM GMT - Time Source: server- IP address: 205.141.129.43
-  Agreement completed.
2023-09-20 - 8:08:52 PM GMT

DEPARTMENT OF CITY CONTROLLER

ID _____ SUPP/REVISION # _____
 VENDOR NUMBER 304977 CONTRACT NUMBER 51544
 CONTRACT DATE 12-23-15 CONTRACT TYPE Prof. Serv.

CONTRACTOR Commonwealth of PA - PENNDOT
 CONTRACT FOR Charles Anderson Bridge project
 DURATION OF CONTRACT 7-1-15 to 6-30-18 RESOLUTION/ORDINANCE RS-312-15

ITEM	<u>3 final years</u> COST/JOB	COST ESTIMATE	RESERVE
<u>1419</u>	<u>402310114</u>	<u>54205.00</u>	<u>\$ 1,250.00</u>
			<u>\$ 1,250.00</u>

PROPERLY SIGNED YES NO
 SPECS ATTACHED YES NO
 COPY RES/ORD ATTACHED YES NO
 HOME RULE CHARTER YES NO
 ADVERTISEMENT DATE _____
 AWARDED TO LOW BIDDER YES NO
 NUMBER OF BIDS _____
 IF NOT LOW BIDDER, WHY _____

BONDS AMOUNT COMPANY
 BID _____

PERFORMANCE _____
 LABOR & MATERIAL _____

POWER OF ATTORNEY ATTACHED	YES	NO	<u>N/A</u>	EXPIRE _____
BONDS PROPERLY EXECUTED	YES	NO	<u>N/A</u>	EXPIRE _____
WORKMEN'S COMP INSURANCE	YES	NO	<u>N/A</u>	EXPIRE _____
LIABILITY & PROPERTY INS.	YES	NO	<u>N/A</u>	EXPIRE _____
AUTOMOBILE INSURANCE	YES	NO	<u>N/A</u>	EXPIRE _____
EXCESS LIABILITY INS.	YES	NO	<u>N/A</u>	EXPIRE _____
PROFESSIONAL LIABILITY INS.	YES	NO	<u>N/A</u>	EXPIRE _____
RETAINAGE	YES	NO	<u>N/A</u>	PERCENTAGE _____
STATEMENTS OF AFFILIATIONS	YES	<input checked="" type="radio"/> NO		

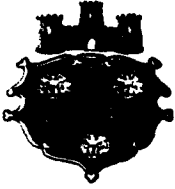
APPROVED BY CITY SOLICITOR YES NO
 APPROVED BY ASS'T CITY SOLICITOR YES NO
 SIGNED AND ATTESTED TO BY MAYOR YES NO
 SWEATSHOP REGULATIONS YES NO YES
 DEPARTMENT AFFIDAVIT YES NO YES
 AWARD JUSTIFICATION YES NO YES

DIRECTOR OR DIRECTORS Public Works

DOES CONTRACT PLACE ANY DUTIES ON CONTROLLER? YES NO

COMMENTS _____
 CONTRACT AUDITOR Melissa Dr. Bros

Authorizing Resolution(s)



City of Pittsburgh

510 City-County Building
414 Grant Street
Pittsburgh, PA 15219

Certified Copy

Resolution: 312

File Number: 2015-1571

Enactment Number: 312

Resolution providing for an Agreement or Agreements, or the use of existing Agreements; providing for a Contract or Contracts, or the use of existing Contracts; providing for repairs, maintenance, improvements, emergencies and/or the purchase of materials, equipment and supplies in connection with the Bridge Repairs program; and further providing for the payment of the cost thereof, not to exceed \$523,116.47.

Be it resolved by the Council of the City of Pittsburgh as follows:

Section 1. The Mayor and the Director of the Department of Public Works, on behalf of the City of Pittsburgh, are hereby authorized to enter into an Agreement or Agreements, or the use of existing Agreements; providing for a Contract or Contracts, or the use of existing Contracts; providing for repairs, maintenance, improvements, emergencies and/or the purchase of materials, equipment and supplies in connection with the Bridge Repairs program, at a cost not to exceed \$523,116.47, chargeable to and payable from the following accounts:

JDE Job No.	JDE Fund	Budget Year	Amount	Source
4031011130	26010	2013	\$ 62,019.10	CDBG
4031011140	26010	2014	\$ 200,000.00	CDBG
4023101114	40014	2014	\$ 98,597.37	BOND
4023101115	40015	2015	<u>\$ 162,500.00</u>	BOND
			\$ 523,116.47	

Any Resolution or Ordinance or part thereof conflicting with the provisions of this Resolution is hereby repealed so far as the same affects this Resolution.

I certify that this is a true copy of Resolution No. 312, passed by Council on 5/12/2015, approved by the Mayor on 5/14/2015. Effective Date 5/14/2015.

Attest: Mary Beth Doheny, City Clerk
Mary Beth Doheny, City Clerk

May 19, 2015
Date Certified

EFFECTIVE DATE : REIMBURSEMENT AGREEMENT NO. : R15110021
(Department will insert)
COUNTY : Allegheny FID NO. : 256000879
MUNICIPALITY : PITTSBURGH SAP VENDOR NO. : 158975
DISTRICT ORG CODE : 1100 MPMS NO. : 91907
ECMS AGREEMENT NO. :

STANDARD BRIDGE REIMBURSEMENT GRANT AGREEMENT

THIS AGREEMENT is made by and between the Commonwealth of Pennsylvania, acting through the Department of Transportation (“DEPARTMENT”),

and

City of Pittsburgh, of the Commonwealth of Pennsylvania, acting through its proper officials (“MUNICIPALITY”).

RECITALS:

WHEREAS, the Congress of the United States has found it to be in the national interest to promote through the states a continuing federal-aid highway program (“Program”) to improve public roads, including bridges on these roads, both on and off federal-aid systems within the states, for the purpose of enhancing the safety and traffic flow on these roads, and has provided funds to be administered in accordance with the provisions of the various federal-aid highway acts, as amended, by the United State Department of Transportation, Federal Highway Administration (“FHWA”); and

WHEREAS, the General Assembly of the Commonwealth of Pennsylvania, pursuant to Act 235 of 1982, as amended, has appropriated funds to aid in the removal, rehabilitation or replacement of eligible bridges under the jurisdiction of eligible local governments; and

WHEREAS, in addition, the General Assembly of the Commonwealth of Pennsylvania, pursuant to Act 26 of 1991, as amended, has provided for the distribution of tax revenues to eligible municipalities to use in offsetting their share of the costs of removing, rehabilitating or replacing eligible bridges; and,

WHEREAS, the MUNICIPALITY is to receive federal, state funds, or a combination of both, as detailed below for the removal, rehabilitation or replacement of eligible bridges; and

WHEREAS, pursuant to Section 2001.1 of the Administrative Code of 1929, as amended, 71 P.S. §511.1, the DEPARTMENT has the power to enter into agreements with political subdivisions for any purpose connected in any way with the DEPARTMENT and pursuant to Section 2002(a)(7) of the Administrative Code of 1929, as amended, 71 P.S. §512(a)(7), has the power to cooperate with political subdivisions in the coordination of plans and policies for the development of commerce and facilities; and,

WHEREAS, pursuant to Section 2305 of the General Local Government Code, as amended, 53 Pa.C.S. §2305, a municipality can delegate any function, power, or responsibility to another governmental unit upon passage of an ordinance by its governing body; and,

WHEREAS, it is necessary for the parties to enter into an agreement to outline their responsibilities and specify the sources of funding.

1. RECITALS

The recitals set forth above are incorporated by reference as a material part of this Agreement.

2. GENERAL PROVISIONS

(a) The MUNICIPALITY shall participate in the administration of a project for Charles Anderson bridge over Shenley Park, CSX and Pittsburgh Junction Railroads, and a bike trail ("Project") in accordance with the policies, procedures, and specifications prepared or approved by the DEPARTMENT, and, if federal funds are provided, the FHWA, and with the conditions of this Agreement. The Project cost estimate is attached as Exhibit "A" and made part of this Agreement.

(b) The MUNICIPALITY's participation shall involve the activities outlined below and shall be in accordance with the provisions and exhibits referenced therein.

(c) The MUNICIPALITY's participation shall be consistent with the most current version of Department Publication 740, *Local Project Delivery Manual*, <ftp://ftp.dot.state.pa.us/public/pubsforms/Publications/PUB%20740.pdf> incorporated into this Agreement by reference as though physically attached to it.

3. APPLICABLE PRECONSTRUCTION RESPONSIBILITIES AND FUNDING AUTHORIZATIONS

The MUNICIPALITY and the DEPARTMENT shall allocate and perform preconstruction responsibilities and administration as indicated below. By receiving funds through the programs indicated below, the MUNICIPALITY agrees to the terms and conditions contained in the exhibit specified under each item as selected and set forth below:

- MUNICIPALITY shall be responsible for preconstruction activities including, but not limited to: preliminary engineering, including environmental studies, final design, utility relocation, and right-of-way acquisition, consistent with the provisions of Exhibit "B" attached hereto.
- DEPARTMENT shall be responsible for preconstruction activities including, but not limited to: preliminary engineering, including environmental studies, final design, utility relocation, and right-of-way acquisition, all of these activities to be conducted by the DEPARTMENT, by contract or using its own forces, on behalf of the MUNICIPALITY, consistent with the provisions of Exhibit "C" attached hereto.

4. AMENDMENTS AND SUPPLEMENTS

(a) If the cost for any phase of the Project listed in Exhibit "A" is blank, or the cost of any phase increases, causing the overall Agreement cost to increase, the parties must execute a letter of amendment that will include a revised Exhibit "A". The DEPARTMENT cannot pay or reimburse the MUNICIPALITY for the costs of these phases until the parties execute the letter of amendment. Adequate federal and/or state funds must be available before the parties execute a letter of amendment. The letter of amendment is not effective until duly authorized representatives of the DEPARTMENT, the MUNICIPALITY, the Office of Chief Counsel, and the Office of Comptroller Operations sign and date the letter of amendment. A sample letter of amendment is attached as Exhibit "D" and made part of this Agreement.

(b) If the DEPARTMENT determines that the cost for any phase listed on Exhibit "A" should be redistributed, and the redistribution does not result in an increase or decrease in total Project costs or any increase in costs to the MUNICIPALITY, the DEPARTMENT will redistribute such costs by sending the MUNICIPALITY notification via a letter of adjustment that will include a revised Exhibit "A". The DEPARTMENT cannot pay or reimburse the

MUNICIPALITY for the costs of these phases until the Office of Comptroller Operations signs and dates the letter of adjustment. The MUNICIPALITY's signature is not required for the letter of adjustment to be effective. A sample letter of adjustment is attached as Exhibit "E" and made part of this Agreement.

(c) If there are changes to any Standard Provisions that need to be addressed at the time of a letter amendment, as described in subparagraph (a), the parties can incorporate those revised and/or updated Standard Provisions by noting the incorporation and attachment of such Standard Provisions to such letter amendment. For the purposes of this subparagraph, Standard Provisions consist of those provisions, exhibits or clauses required to be included in Commonwealth agreements pursuant to federal or state law or Commonwealth Management Directives, including, but not limited to: Americans with Disabilities Act, Right-to-Know Law, Contractor Integrity, Contractor Responsibility, Offset, Federal Nondiscrimination; Commonwealth Nondiscrimination, Disadvantaged Business Enterprise Regulatory Compliance Requirements, Disadvantaged Business Enterprise Assurance, Lobbying, Federal Funding Accountability and Transparency Act, and Federal Audit Requirements. Changes that would otherwise require only a letter adjustment as detailed in subparagraph (b) will need a letter amendment as detailed in subparagraph (a) if one of these Standard Provisions described herein needs updating.

(d) If the MUNICIPALITY proceeds to construction before funds are made available, either through this Agreement, or a letter of amendment or letter of adjustment, signed by the appropriate parties, the DEPARTMENT may reimburse the MUNICIPALITY for the state funded portion of the Project. Retroactive reimbursement of federal funds will not be permitted unless the Federal Form 4232, authorizing federal funds for latter phases of the project was in place prior to performance of any work.

(e) All other changes to terms and conditions of this Agreement must be in the form of a fully executed supplemental agreement signed by all the same entities that executed the original agreement.

5. AVAILABILITY OF MUNICIPAL FUNDS

The MUNICIPALITY, by executing this Agreement, certifies that it has on hand sufficient funds to meet all of its obligations under the terms of this Agreement. Further, the

MUNICIPALITY, and not the DEPARTMENT, shall bear and provide for all costs incurred in excess of those costs eligible for state or federal funding.

6. CONTRACT DEVELOPMENT

(a) If the MUNICIPALITY is responsible for preconstruction activities as indicated in Paragraph 3 above, the MUNICIPALITY, by contract or with its own forces, shall be responsible for all work involved with contract development, including preparation of all plans, specifications, and estimates ("PS&E"). The essential documents to be prepared are set forth in Exhibit "F", which is attached to and made part of this Agreement. All work shall conform with applicable federal and state laws and requirements, including, but not limited to, those outlined in the most current version of Publication 740, *Local Project Delivery Manual*.

(b) If the DEPARTMENT is responsible for preconstruction activities as indicated in Paragraph 3 above, the DEPARTMENT will prepare the PS&E consistent with federal and state laws and requirements and the most current version of Publication 740, *Local Project Delivery Manual*.

(c) Upon completion or submission, as applicable, of the PS&E, the DEPARTMENT, subject to reimbursement by the MUNICIPALITY for preparation costs, shall prepare the bid proposal documents required to bid the Project and issue an authorization to advertise for bids, upon:

- (i) FHWA authorization of the Project, if federal funds are being used on the Project;
- (ii) Approval of a right-of-way certification, if applicable;
- (iii) Approval of a Utility Clearance Assurance statement;
- (iv) Completion of the PS&E review;
- (v) Satisfactory resolution of any comments; and
- (vi) Receipt of applicable environmental permits.

(d) The DEPARTMENT, prior to issuance to prospective bidders, must review and approve any addenda to the approved bid documents. The DEPARTMENT shall issue addenda no later than three (3) calendar days before the proposed bid opening. All bid documents shall

require that the contractor be prequalified by the DEPARTMENT pursuant to 67 Pa. Code Chapter 457, *Prequalification of Bidders*. All bid documents shall require that the prospective bidders name the MUNICIPALITY and DEPARTMENT as additional insureds on the certificate of insurance.

7. LETTING AND AWARD

(a) Except as provided in subparagraph (c) below, relating to paper lets, the DEPARTMENT shall advertise for bids, open bids and with the concurrence of the MUNICIPALITY (which will indicate its concurrence electronically) award the construction contract in the name of the MUNICIPALITY, all in accordance with DEPARTMENT Publication No. 740. The MUNICIPALITY shall enter into and execute the contract with the successful bidder electronically through ECMS. Following coordination with the MUNICIPALITY, the DEPARTMENT shall issue the notice to proceed through ECMS to the contractor.

(b) If the MUNICIPALITY has not already executed a Business Partner Agreement and registered with the DEPARTMENT as a business partner in order to access the DEPARTMENT's Engineering and Construction Management System ("ECMS"), the MUNICIPALITY must execute a Business Partner Agreement with the DEPARTMENT in order to obtain such access prior to the Project's being advertised.

(c) In those limited instances where the MUNICIPALITY has requested and received from the DEPARTMENT approval to conduct a paper let instead of having the Project administered through ECMS, letting and award shall be in accordance with DEPARTMENT policies and procedures applicable to projects not administered in ECMS.

8. CONSTRUCTION INSPECTION

(a) The MUNICIPALITY, with its own forces or by contract, may provide staff to inspect and supervise adequately all construction work in accordance with the approved plans and specifications, including, but not limited to, the most current version of DEPARTMENT Publication No. 408, and its supplements and amendments. If the MUNICIPALITY is providing inspection services, the MUNICIPALITY shall provide the proper supervision and construction inspection to ensure that all work is in accordance with the most current version of

DEPARTMENT Publication No. 9, *Policies and Procedures for the Administration of the County Liquid Fuels Tax Act of 1931 and the Liquid Fuels Tax Act 655 Dated 1956 and as Amended*. The DEPARTMENT, based on requirements of the most current version of DEPARTMENT Publication No. 740, will determine the level of inspection and the number of inspectors required for the Project, as well as the qualifications required for the MUNICIPALITY's inspectors. Normally at least one inspector is required for each project. The DEPARTMENT will oversee the Project but will not provide inspection services unless the parties, by mutual consent, specifically agree for the DEPARTMENT to provide inspection services. If the parties agree that the DEPARTMENT will provide inspection services, those costs will be included in the budget for the Agreement, as detailed in Exhibit "A".

(b) If federal funds are used, the work shall also be in accordance with the most current version of the Federal-Aid Policy Guide, Chapter I, Subchapter G, Parts 633, 635, and 637, *Required Contract Provisions, Construction and Maintenance, and Construction Inspection and Approval*. In addition, if federal funds are used, allowable construction engineering costs may include such work items as inspection, certification, and test of materials and surveys in accordance with the Federal-Aid Policy Guide, Chapter I, Subchapter B, Part 140, and 23 C.F.R. § 1.11. Such costs are eligible for federal participation only to the extent that they are directly attributable and properly allocable to the Project.

9. PAYMENT PROCEDURES AND RESPONSIBILITIES FOR EXPENSES INCURRED BY MUNICIPALITY

(a) The MUNICIPALITY shall submit to the DEPARTMENT certified periodic (maximum of two (2) per month) invoices for the following items:

- (i) Allowable costs for work performed by MUNICIPALITY's forces on the Project;
- (ii) Work performed on the Project by the MUNICIPALITY's consultant(s) or contractor(s); and
- (iii) Allowable costs incurred in the acquisition of right-of-way and utility relocations.

(b) The DEPARTMENT shall pay the MUNICIPALITY for all but the MUNICIPALITY's share of the total allowable Project costs for preliminary engineering, final

design, utility relocation, right-of-way acquisition and construction costs incurred by the MUNICIPALITY. Refer to Exhibit "A" for the estimated cost breakdown by dollar amounts and percentages. If federal funds are being used for the Project, the DEPARTMENT, for the federal share of the Project costs, shall submit necessary documents to the FHWA for payment and credit receipt of any funds to the appropriate account.

(c) The MUNICIPALITY is obligated to submit to the DEPARTMENT invoices from its consultant(s) and contractor(s) as it receives them, in accordance with the periodic schedule set forth in subparagraph (a) above, to assure prompt payment of the consultant(s) and contractor(s) for work performed to date.

(d) The MUNICIPALITY shall pay the DEPARTMENT, the MUNICIPALITY, and if applicable, the federal shares to its consultant(s) and contractor(s) within ten (10) calendar days of the date of the DEPARTMENT's payment to the MUNICIPALITY. The MUNICIPALITY, as part of its record-keeping obligations, shall maintain records of receipt and payment of such funds. If the MUNICIPALITY fails to comply with this subparagraph or with the requirements of subparagraph (c) relating to submission of invoices, the MUNICIPALITY shall be in default pursuant to Paragraph 14 and the DEPARTMENT shall have the further right to change payment procedures unilaterally to a reimbursement basis.

(e) If the DEPARTMENT changes payment procedures unilaterally to a reimbursement basis, as provided in subparagraph (d), the following procedures shall apply:

(i) The MUNICIPALITY shall submit to the DEPARTMENT certified periodic (maximum of two (2) per month) invoices for reimbursement.

(ii) The MUNICIPALITY shall include with the invoices verification of payment of the consultant(s) or contractor(s) by means of a copy of the cancelled check or certified letter from the consultant(s) or contractor(s) acknowledging payment.

(iii) After reviewing the verification concerning payment of the consultant(s) or contractor(s) and material certifications and determining them to be satisfactory, the DEPARTMENT shall approve the invoices for payment and process the invoices for payment from state and federal funds. As state and/or

federal funds are made available, the DEPARTMENT shall reimburse the MUNICIPALITY for the proportionate share of the approved charges.

(f) The MUNICIPALITY shall be responsible for costs not reimbursed by the DEPARTMENT with federal or state funds, including, but not limited to, the following:

- (i) Any and all costs relating to or resulting from changes made to the approved plans or specifications;
- (ii) Time delays and extensions of time or termination of construction work;
- (iii) Interest for late payments;
- (iv) Interest incurred by borrowing money;
- (v) Unforeseen right-of-way and other property damages and costs resulting from the acquisition and/or condemnation of lands for the Project or construction of the improvements;
- (vi) Unforeseen utility relocation costs;
- (vii) Unforeseen costs for environmental litigation and reports; and
- (viii) All other unforeseen costs and expenses not included in the estimates of preliminary engineering, final design, utility relocation, right-of-way acquisition and construction costs, but which are directly related to or caused by the planning, design or construction of the Project.

(g) The DEPARTMENT shall not reimburse the MUNICIPALITY for additional or extra work done or materials furnished that are not specifically provided for in the approved plans and specifications, unless the DEPARTMENT has issued prior written approval of the additional or extra work or materials. If the MUNICIPALITY performs any work or furnishes any materials without the DEPARTMENT's prior written approval, the MUNICIPALITY does so at its own risk, cost and expense. The MUNICIPALITY shall not interpret the DEPARTMENT's approval as authority to increase the maximum amount of reimbursement in subparagraph (b) above.

(h) The MUNICIPALITY shall submit its final invoices for payment or reimbursement, as the case may be, of the items set forth in subparagraph (a) to the

DEPARTMENT within one (1) year of the acceptance of the Project. If the MUNICIPALITY fails to submit its final invoices within this one- (1-) year period, it may forfeit all remaining federal and/or state financial participation in the Project.

10. PAYMENT PROCEDURES AND RESPONSIBILITIES FOR EXPENSES INCURRED BY DEPARTMENT

(a) For services performed by the DEPARTMENT, including, but not limited to, all preconstruction services specified in Paragraph 3 above if performed by the DEPARTMENT or the DEPARTMENT's consultant(s), as well as required contract development, liaison and supervisory services, the MUNICIPALITY shall directly reimburse the DEPARTMENT for the MUNICIPALITY's share of the DEPARTMENT's incurred costs. The DEPARTMENT will submit invoices to the FHWA for reimbursement of the federal share of such costs if the Project is federally funded. The estimated costs of these services and the MUNICIPALITY's share, by dollar amounts and percentages, are set forth in Exhibit "A".

(b) If the DEPARTMENT is performing preconstruction services as indicated in Paragraph 3 above, the DEPARTMENT shall invoice the MUNICIPALITY no more than monthly, but no less than quarterly, for costs incurred by the DEPARTMENT for the Project on the MUNICIPALITY's behalf during preconstruction. For administrative services performed by the DEPARTMENT during construction the DEPARTMENT shall invoice the MUNICIPALITY no more than annually or once toward end of the Project, for such costs incurred by the DEPARTMENT on the MUNICIPALITY's behalf.

(c) If the MUNICIPALITY is performing preconstruction services as indicated in Paragraph 3 above, the DEPARTMENT shall invoice the MUNICIPALITY no more than annually, or once toward end of the Project, for costs incurred by the DEPARTMENT for the Project on the MUNICIPALITY's behalf.

(d) The MUNICIPALITY shall pay the DEPARTMENT within 45 days of the mailing date of the DEPARTMENT's invoice. Failure to pay the DEPARTMENT within this period may halt further progress on the Project until payment is received and the MUNICIPALITY shall be responsible for any increase in costs due to such stoppage or delay. If such failure to pay exceeds 60 days, the MUNICIPALITY shall be deemed to be in Default, for the purposes of Paragraph 14.

(e) The MUNICIPALITY shall be responsible for costs not eligible for payment by federal or state funds, including, but not limited to, the following:

- (i) Any and all costs relating to or resulting from changes made to the approved plans or specifications;
- (ii) Time delays and extensions of time or termination of construction work;
- (iii) Interest for late payments;
- (iv) Interest incurred by borrowing money;
- (v) Unforeseen right-of-way and other property damages and costs resulting from the acquisition and/or condemnation of lands for the Project or construction of the improvements;
- (vi) Unforeseen utility relocation costs;
- (vii) Unforeseen costs for environmental litigation and reports; and
- (viii) All other unforeseen costs and expenses not included in the estimates of preliminary engineering, final design, utility relocation, right-of-way acquisition and construction costs, but which are directly related to or caused by the planning, design or construction of the Project.

11. RECORDS

The MUNICIPALITY shall maintain, and shall require its consultant(s) and contractor(s) to maintain, all books, documents, papers, records, supporting cost proposals, accounting records, employees' time cards, payroll records and other evidence pertaining to costs incurred in the Project and shall make these materials available at all reasonable times during the contract period and for three (3) years beyond the termination of this Agreement or submission of the final voucher to the FHWA, whichever is later, for inspection or audit by the DEPARTMENT, the FHWA (if applicable), or any other authorized representatives of the federal or state government; and copies thereof shall be furnished, if requested. Time records for personnel performing any work on the Project shall account for direct labor performed on the Project as well as the time of any personnel included in the computation of overhead costs. In addition, the MUNICIPALITY shall keep, and shall require its consultant(s) or contractor(s), as applicable, to

keep, a complete records of time for personnel assigned part-time to the Project. A record of time limited to only their work on this Project will not be acceptable. The DEPARTMENT will maintain, and require its consultant(s) and contractor(s) to maintain all records pursuant to applicable state and federal requirements.

12. MAINTENANCE AND OPERATION OF THE FACILITY

(a) The MUNICIPALITY, at its sole cost and expense, shall operate and maintain all of the completed improvements financed under this Agreement that fall within its jurisdiction. All stormwater and drainage facilities constructed or improved in connection with the Project are within the MUNICIPALITY's jurisdiction. The MUNICIPALITY shall establish a formalized maintenance program to ensure an acceptable level of physical integrity and operation consistent with original design standards. The MUNICIPALITY certifies that it shall make available sufficient funds to provide for the described maintenance program. This maintenance program shall include, but not be limited to, the following activities:

- (i) Periodic inspections in accordance with National Bridge Inspection Standards;
- (ii) Appropriate preventative maintenance;
- (iii) A systematic record-keeping system; and
- (iv) A means to handle the notification and implementation of emergency repairs.

(b) The MUNICIPALITY acknowledges that the DEPARTMENT may disqualify the MUNICIPALITY from future federal-aid or state participation on MUNICIPALITY-maintained projects if the MUNICIPALITY fails to:

- (i) Provide for the proper maintenance and operation of the completed improvements; or
- (ii) Maintain and enforce compliance with any statutes, regulations ordinances or permits necessary for the operation of the improvements under its jurisdiction.

(c) The MUNICIPALITY agrees that the DEPARTMENT shall withhold federal-aid or state funds, or both, until one or both of the following (as applicable) have taken place:

(i) The MUNICIPALITY has corrected the maintenance and operation services to a condition of maintenance and operation satisfactory to the DEPARTMENT.

(ii) The MUNICIPALITY has brought traffic operations on the improvements, including enforcement of statutes, regulations or ordinances, up to a level satisfactory to the DEPARTMENT.

(d) The MUNICIPALITY agrees that it will comply with all applicable statutes and regulations relating to traffic control devices, including, but not limited to, 75 Pa. C.S. §6109 and 67 Pa Code §212.5.

(e) This Agreement is without prejudice to the right of the MUNICIPALITY to receive reimbursement for maintenance costs from any railroad or party other than the DEPARTMENT, if so ordered by the PUC, where a rail-highway crossing bridge is under the jurisdiction of the PUC.

13. SAVE HARMLESS

(a) The MUNICIPALITY shall indemnify, save harmless and defend (if requested) the FHWA (if applicable), the Commonwealth of Pennsylvania, the DEPARTMENT, and all of their officers, agents and employees, from all suits, actions or claims of any character, name or description, including, but not limited to, those in eminent domain or otherwise relating to title to real property or under any environmental or historic preservation permit, approval or statute, relating to personal injury, including death, or property damage, arising out of, resulting from or connected with the planning, development, design, acquisition, construction, operation or maintenance of the Project improvements, by the MUNICIPALITY, its consultant(s) or contractor(s), their officers, agents and employees, whether the same be due to the use of defective materials, defective workmanship, neglect in safeguarding the work or by or on account of any act omission, neglect or misconduct of the MUNICIPALITY, its consultant(s) or contractor(s), their officers, agents, and employees, during the performance of the work or thereafter, or to any other cause whatever. This provision shall not be construed to limit the MUNICIPALITY's rights, claims or defenses which arise as a matter of law. In the event, the MUNICIPALITY, pursuant to the terms of this Agreement, assumes maintenance

responsibilities for improvements within the right-of-way of the Commonwealth, this Agreement shall be considered a maintenance agreement for the purposes of 42 Pa. C.S. §8542(b)(6).

(b) This Agreement shall not be construed for the benefit of any person or political subdivision not a party to this Agreement, nor shall this Agreement be construed to authorize any person or political subdivision not a party to this Agreement to maintain a lawsuit on or under this Agreement.

14. DEFAULT CLAUSE

If the MUNICIPALITY fails to perform any of the terms, conditions or provisions of this Agreement, including, but not limited to, any default of payment for a period of sixty (60) days, the MUNICIPALITY authorizes the DEPARTMENT to withhold so much of the MUNICIPALITY's Liquid Fuels Tax Fund allocation as may be necessary to complete the Project or reimburse the DEPARTMENT in full for all costs due under this Agreement; and the MUNICIPALITY authorizes the DEPARTMENT to withhold such amount and to apply such funds, or portion thereof, to remedy such default. In the event the amount of such default amounts to more than 100 % of the MUNICIPALITY's annual Liquid Fuels Tax Fund allocation for the fiscal year in which such default occurred, the DEPARTMENT shall withhold no more than 50 % of the MUNICIPALITY's annual Liquid Fuels Tax for said fiscal year, the balance to be withheld up to that maximum percentage each fiscal year thereafter until said balance has been paid in full.

15. NONDISCRIMINATION PROVISIONS

The parties agree, and the MUNICIPALITY shall also provide in its contracts as applicable for the Project, that all designs, plans, specifications, estimates of cost, construction, utility relocation work, right-of-way acquisition procedures, acceptance of the work and procedures in general, shall at all times conform to all applicable federal and state laws, rules, regulations orders and approvals, including specifically the procedures and requirements relating to labor standards, equal employment opportunity, nondiscrimination, antisolicitation, information, and reporting provisions and if federal funds are used on the project, auditing requirements. The MUNICIPALITY shall comply, and shall cause its consultant(s) and contractor(s) to comply, with the conditions set forth in the current version of:

(a) If no federal funds are used, the Commonwealth Nondiscrimination/Sexual Harassment Clause, which is attached as Exhibit "G-1" and made part of this Agreement.

(b) If federal funds are used, the Federal Nondiscrimination and Equal Employment Opportunity Clauses, which are attached as Exhibit "G-2" and made part of this Agreement.

(c) Regardless of which provision applies, the term "Contractor" means the MUNICIPALITY.

16. CONTRACT PROVISIONS FOR CONTRACTOR INTEGRITY, AMERICANS WITH DISABILITIES, CONTRACTOR RESPONSIBILITY, AND RIGHT TO KNOW LAW

The MUNICIPALITY shall comply, and shall cause its consultant(s) and contractor(s) to comply with the current versions of the provisions set forth below. As used in these provisions, the term "Contractor" means the MUNICIPALITY:

(a) The Contractor Integrity Provisions attached as Exhibit "H" and made part of this Agreement;

(b) The Provisions Concerning the Americans with Disabilities Act attached as Exhibit "I" and made part of this Agreement;

(c) The Contractor Responsibility Provisions attached as Exhibit "J" and made part of this Agreement;

(d) The Right-to-Know Law provisions attached as Exhibit "K" and made part of this Agreement;

17. OFFSET PROVISION

The MUNICIPALITY agrees that the Commonwealth of Pennsylvania ("Commonwealth") may set off the amount of any state tax liability or other obligation of the MUNICIPALITY or its subsidiaries to the Commonwealth against any payments due the MUNICIPALITY under any contract with the Commonwealth.

18. CONTRACT PROVISIONS FOR PROJECTS INVOLVING FEDERAL FUNDS

If federal funds are used for this Project, the MUNICIPALITY shall comply, and shall cause its consultant(s) and contractor(s) to comply with the provisions set forth in this paragraph.

As used in these provisions, the term “Contractor” or “Grantee” or “Subrecipient” means the MUNICIPALITY.

(a) FEDERAL FUNDING ACCOUNTABILITY AND TRANSPARENCY ACT OF 2006:

As a subrecipient of federal funding, the MUNICIPALITY shall provide to the Commonwealth the information specified in the Federal Funding Accountability and Transparency Act of 2006, Grantee Information, attached as Exhibit “L” and made part of this Agreement to ensure that the Commonwealth meets the reporting requirements imposed on it by the Federal Funding Accountability and Transparency Act of 2006.

(b) LOBBYING CERTIFICATION DISCLOSURE

Public Law 101-121, §319, 31 U.S.C. §1352, prohibits the recipient or any lower tier subrecipients of a federal contract, grant, loan or cooperative agreement from expending federal funds to pay any person for influencing or attempting to influence a federal agency or Congress in connection with the awarding of any federal contract, the making of any federal grant or loan or the entering into of any cooperative agreement. The MUNICIPALITY agrees to comply with the Lobbying Certification Form attached as Exhibit “M” and made part of this Agreement, and which an authorized official of the MUNICIPALITY has executed.

(c) AUDIT REQUIREMENTS

As specified by the Federal Office of Management and Budget, the MUNICIPALITY agrees to satisfy the audit requirements contained in the Single Audit Act of 1984, 31 U.S.C. §7501 *et seq.*, and for the purpose, to comply with the current version of the *Audit Clause to Be Used in Agreements with Entities Receiving Federal Awards from the Commonwealth*, which is attached as Exhibit “N” and made part of this Agreement.

(d) DISADVANTAGED BUSINESS ENTERPRISE REGULATORY COMPLIANCE REQUIREMENTS

The MUNICIPALITY shall take the following steps, where applicable, in order to comply with the Disadvantaged Business Enterprise (“DBE”) requirements of current federal highway funding authorizations and regulations adopted pursuant thereto:

- (i) For federally-assisted transportation-related projects, the DEPARTMENT may establish a percentage participation goal. The MUNICIPALITY shall work

with the DEPARTMENT's District Office concerning the necessity of establishing a goal for this Project. If a DBE goal is not applicable, the MUNICIPALITY shall comply with the "Disadvantaged Business Enterprise and Small Business Concern Involvement" provision, which is attached as Exhibit "O" and made a part of this Agreement. If a goal is established, this goal must be attained by the MUNICIPALITY's contractor or, in the alternative, a showing of good faith effort must be made. Determination of good faith effort shall be made by the MUNICIPALITY and is subject to the concurrence of the DEPARTMENT. The MUNICIPALITY shall comply with the following provisions, as applicable:

(1) If the Project requires prequalification, the MUNICIPALITY shall comply with *Designated Special Provision 7* of the Publication 408 Specifications, current edition, accessible online at <ftp://ftp.dot.state.pa.us/public/bureaus/design/pub408/Pub%20408%202011%20IE/DSP7-final.pdf>.

(2) If the Project is prequalification exempt, the MUNICIPALITY shall comply with the *Disadvantaged Business Enterprise Requirements—Prequalification Exempt*, attached as Exhibit "P" and made a part of this Agreement.

(3) If the Project includes a design component, the MUNICIPALITY shall comply with the *DBE Special Requirements—Engineering*, attached as Exhibit "Q" and made a part of this Agreement.

(ii) All DBE's must be certified by the Pennsylvania Unified Certification Program ("PA UCP") before the bid submission date.

(e) **REQUIRED DISADVANTAGED BUSINESS ENTERPRISE ASSURANCE PROVISION**

(i) The MUNICIPALITY shall not discriminate on the basis of race, color, national origin or sex in the performance of this Agreement. The MUNICIPALITY shall carry out applicable requirements of 49 C.F.R. Part 26 in the award and administration of United States Department of Transportation-

assisted contracts. Failure by the MUNICIPALITY to carry out these requirements is a material breach of this Agreement, which may result in either the termination of this Agreement or such other remedy the DEPARTMENT deems appropriate, including, but not limited to, withholding progress payments; assessing sanctions; liquidated damages; and/or disqualifying the MUNICIPALITY from future bidding as non-responsible.

(ii) As a recipient of funds from the DEPARTMENT, the MUNICIPALITY must include the assurance set forth in subparagraph (a) in each contract into which it enters to carry out the Project or activities being funded by this Agreement.

19. TERMINATION FOR LACK OF FUNDS

The DEPARTMENT may terminate this Agreement if the DEPARTMENT does not receive the necessary federal or state funds allocated for the purpose stated in this Agreement. Termination shall become effective as of the termination date specified in the DEPARTMENT's written notice of termination to the MUNICIPALITY specifying the reason for termination. The DEPARTMENT shall reimburse the MUNICIPALITY for eligible work performed by the MUNICIPALITY or its consultant(s) or contractor(s) up to the date of the notice of termination or such other date that the notice of termination shall specify.

20. ELECTRONIC ACCESS TO ENGINEERING AND CONSTRUCTION MANAGEMENT SYSTEM

If the MUNICIPALITY has not already executed a Business Partner Agreement and registered with the DEPARTMENT as a business partner in order to access the DEPARTMENT's Engineering and Construction Management System ("ECMS"), the MUNICIPALITY must enter into a business partner agreement with the DEPARTMENT in order to obtain such access prior to the advertisement of any Project phases being let through ECMS.

21. AUTOMATED CLEARING HOUSE PROVISIONS

Because the DEPARTMENT will be making any payments under this Agreement

through the Automated Clearing House (“ACH”) Network, the MUNICIPALITY shall comply with the following provisions governing payments through ACH:

(a) The DEPARTMENT will make payments to the MUNICIPALITY through ACH. Within ten (10) days of the execution of this Agreement, the MUNICIPALITY must submit or must have already submitted its ACH information on an ACH enrollment form (obtained at www.vendorregistration.state.pa.us/cvmu/paper/Forms/ACH-EFTenrollmentform.pdf) and electronic addenda information, if desired, to the Commonwealth of Pennsylvania’s Payable Service Center, Vendor Data Management Unit at 717-214-0140 (FAX) or by mail to the Office of Comptroller Operations, Bureau of Payable Services, Payable Service Center, Vendor Data Management Unit, 555 Walnut Street – 9th Floor, Harrisburg, PA 17101.

(b) The MUNICIPALITY must submit a unique invoice number with each invoice submitted. The unique invoice number will be listed on the Commonwealth of Pennsylvania’s ACH remittance advice to enable the MUNICIPALITY to properly apply the state agency’s payment to the respective invoice or program.

(c) It is the responsibility of the MUNICIPALITY to ensure that the ACH information contained in the Commonwealth’s central vendor master file is accurate and complete. Failure to maintain accurate and complete information may result in delays in payments.

22. EFFECTIVE DATE AND DURATION OF AGREEMENT

(a) This Agreement will not be effective until executed by all necessary Commonwealth officials as required by law. Following full execution, the DEPARTMENT will insert the effective date at the top of Page 1.

(b) The Agreement shall remain in effect for three (3) fiscal years, beginning with the state fiscal year in which it takes effect and continuing for the two (2) succeeding fiscal years. The MUNICIPALITY and the DEPARTMENT understand and agree that, regardless of which party is responsible for preconstruction activities as set forth in Paragraph 3, the responsible entity must proceed diligently to move the Project to completion. If no activity, “activity” consisting of the payment of at least one invoice from the MUNICIPALITY by the

DEPARTMENT, occurs prior to the end of the third fiscal year, the Agreement shall terminate on June 30 of the third fiscal year. However, if any activity occurs prior to the end of the third fiscal year, the Agreement shall be automatically extended for a fourth fiscal year, and the MUNICIPALITY shall complete the Project by the end of that fourth fiscal year. If the MUNICIPALITY has not completed the Project by June 30 of that fourth fiscal year, the Agreement shall then automatically terminate, unless the MUNICIPALITY requests a time extension, providing detailed justification therefor, and the DEPARTMENT, in its discretion, authorizes a time extension in writing. If the Project involves federal funds, any such extensions must comply with 23 C.F.R. 630.112(C)(2) relating to limits on federal funding authorization.

(c) If this Agreement is terminated in accordance with Subparagraph (b) above, the MUNICIPALITY must reimburse any state or federal funds provided pursuant to this Agreement, because the FHWA and/or the DEPARTMENT will not participate in any costs of a project that is not completed with the exception of state-funded design costs. Accordingly the MUNICIPALITY shall reimburse the DEPARTMENT, within forty-five (45) days of receipt of a statement from the DEPARTMENT, in an amount equal to the sum of the following:

- (i) Any and all FHWA funds received by the MUNICIPALITY for return to the FHWA;
- (ii) Any and all FHWA funds paid to the DEPARTMENT for work performed under this Agreement for return to the FHWA;
- (iii) All costs incurred by the DEPARTMENT under this Agreement prior to the time of termination that the FHWA or the MUNICIPALITY has not already reimbursed;
- (iv) All right-of-way acquisition, utility relocation and construction funds made available to the MUNICIPALITY under Act 235 of 1982 and, if applicable, Act 26 of 1991, both as amended. If project development activities are subsequently reinitiated, the MUNICIPALITY should utilize the previous design work. The DEPARTMENT will not provide state funds to update design work from a previously terminated project.

(d) If the MUNICIPALITY fails to reimburse the DEPARTMENT or the FHWA (if applicable) within the time period set forth in subparagraph (c) above, the MUNICIPALITY shall be in default pursuant to Paragraph 14 of this Agreement.

23. RESOLUTIONS AND ORDINANCES

The MUNICIPALITY shall enact, adopt, or both any and all resolutions or ordinances, including, but not limited to, ordinances necessary to authorize the DEPARTMENT to act on the MUNICIPALITY's behalf with respect to acquisition of rights-of-way or applications to the Pennsylvania Public Utility Commission, as may be necessary to effect the purposes of this Agreement.

ARTICLE XVIII: PITTSBURGH HOME RULE CHARTER; LIABILITY OF CITY

This agreement is subject to the provisions of the Pittsburgh Home Rule Charter, and the liability of CITY hereunder is limited to the sum of One Thousand Two Hundred Fifty Dollars (\$1,250.00) appropriated for the same, chargeable to and payable from the following Code Account(s):

Res. No.	JDE Account No.	JDE Fund	JDE JOB NO.	Budget Year	Amount	Source	Item No.
312-15	54205	40014	4023101114	2014	\$ 1,250.00	BOND	1419

ARTICLE XIX. AUTHORIZING RESOLUTION

This agreement is entered into by CITY pursuant to Resolution No. 312, approved May 14, 2015, effective May 14, 2015.

DO NOT WRITE BELOW THIS LINE--FOR COMMONWEALTH USE ONLY

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BY _____
Deputy Secretary or Designee DATE

APPROVED AS TO LEGALITY
AND FORM

BY _____
for Chief Counsel Date

BY _____
for Comptroller Operations Date

Preapproved Form:
OGC No. 18-FA-65.0
Approved OAG 09/30/13

Reimbursement Agreement No. R15110021 is split 80.00% , expenditure amount of \$ 640,000.00 for federal funds and 15.00% , expenditure amount of \$ 116,250.00 for state funds. The related federal assistance program name and number is Highway Planning and Construction ; 20.205
The state assistance program name and number is Local Bridge Construction ; 2618315223

IN WITNESS WHEREOF, the parties have executed this Agreement the date first above written.

CITY OF PITTSBURGH

WITNESS:

Beverly Ache-Pobichki 11-30-15
Title (Secretary) Date

Michael Gable 11/30/15
Director Date
Department of Public Works

EXAMINED BY:

[Signature]
Assistant City Solicitor Date

APPROVED AS TO FORM:

[Signature]
City Solicitor Date

ATTEST:

[Signature] 12/15/15
Secretary to the Mayor Date

[Signature] 12/15/15
Mayor Date



DATE OF CONTRACT	CONTRACT NUMBER	APPROPRIATION	
		ITEM	AMOUNT CHARGED
12-23-15	51544	as entered	81,250.00

CITY CERTIFY THE ABOVE CONTRACT IS NUMBERED IN THE ORDER OF ITS DATE AND THE AMOUNT THEREOF IS CHARGED AGAINST THE PROPER ITEM OF APPROPRIATION IS COUNTERSIGNED SUBJECT TO THIS CONDITION

APPROVED AS TO FORM:

[Signature] 1/5/16
Solicitor to the Controller Date

CERTIFIED AND COUNTERSIGNED
[Signature]
City Controller Date
1-22-16

PROJECT ESTIMATED COSTS

Reimbursement Agreement No: R15110021

County: Allegheny

Municipality: PITTSBURGH

Project Name: Charles Anderson Bridge

MPMS No: 91907

Engineering Agreement No:

	Municipality Incurred Costs	Commonwealth Incurred Costs	Phase Totals
Preliminary Engineering	\$ 775,000.00	\$ 25,000.00	\$ 800,000.00
Final Design			\$ 0.00
Utilities			\$ 0.00
Right of Way			\$ 0.00
Construction			\$ 0.00
SUBTOTALS	\$ 775,000.00	\$ 25,000.00	\$ 800,000.00

COST SHARING (Municipality Incurred Costs)

	Federal	%	State	%	Municipality	%	Phase Totals
Preliminary Engineering	\$ 620,000.00	(80.00%)	\$ 116,250.00	(15.00%)	\$ 38,750.00	(5.00%)	\$ 775,000.00
Final Design	\$ 0.00	()	\$ 0.00	()	\$ 0.00	()	\$ 0.00
Utilities	\$ 0.00	()	\$ 0.00	()	\$ 0.00	()	\$ 0.00
Right of Way	\$ 0.00	()	\$ 0.00	()	\$ 0.00	()	\$ 0.00
Construction	\$ 0.00	()	\$ 0.00	()	\$ 0.00	()	\$ 0.00
TOTALS	\$ 620,000.00		\$ 116,250.00		\$ 38,750.00		\$ 775,000.00

COST SHARING (Commonwealth Incurred Costs)

	Federal	%	State	%	Municipality	%	Phase Totals
Preliminary Engineering	\$ 20,000.00	(80.00%)	\$ 3,750.00	(15.00%)	\$ 1,250.00	(5.00%)	\$ 25,000.00
Final Design	\$ 0.00	()	\$ 0.00	()	\$ 0.00	()	\$ 0.00
Utilities	\$ 0.00	()	\$ 0.00	()	\$ 0.00	()	\$ 0.00
Right of Way	\$ 0.00	()	\$ 0.00	()	\$ 0.00	()	\$ 0.00
Construction	\$ 0.00	()	\$ 0.00	()	\$ 0.00	()	\$ 0.00
TOTALS	\$ 20,000.00		\$ 3,750.00		\$ 1,250.00		\$ 25,000.00

TOTAL COST

Federal	%	State	%	Municipality	%	Total
\$ 640,000.00	(80.00%)	\$ 120,000.00	(15.00%)	\$ 40,000.00	(5.00%)	\$ 800,000.00

Amount Eligible to be Reimbursed to Municipality \$ 736,250.00

STANDARD BRIDGE EXHIBIT "B"
FOR PROJECTS WHERE MUNICIPALITY IS RESPONSIBLE
FOR MANAGING PRECONSTRUCTION ACTIVITIES

These provisions shall apply if the parties have opted, in Paragraph 3 of the Agreement to which this Exhibit is attached, for the MUNICIPALITY to assume responsibility for preconstruction activities for the Project authorized by this Agreement.

A. DESIGN

(1) The MUNICIPALITY, with its own forces or by contract, shall design the Project. The design shall be in accordance with policies, procedures and specifications prepared or approved by the DEPARTMENT and the FHWA, including, but not limited to, the most current versions of the following:

- (a) DEPARTMENT Publication No. 70M, *Guidelines for Design of Local Roads and Streets*;
- (b) DEPARTMENT Publication No. 740;
- (c) DEPARTMENT Design Manuals (Publication Nos. 10, 13M, 14M, 15M, and 16M);
- (d) DEPARTMENT Policy Letters;
- (e) DEPARTMENT Form No. 442, *Bureau of Design Specifications for Consultant Agreements*, Division I;
- (f) DEPARTMENT Publication 93, *Policy and Procedures for the Administration of Consultant Agreements*; and
- (g) DEPARTMENT Publication No. 408, *Specifications*, its supplements and amendments.

(2) The MUNICIPALITY shall secure all necessary approvals, permits and licenses from all other governmental agencies, as may be required to complete the Project. The MUNICIPALITY will be the applicant and ultimately the permittee or licensee. This obligation includes preparing or revising environmental reports or other

documents such as environmental impact statements, environmental assessments or categorical exclusions required by law, environmental litigation or both; and the defense of environmental litigation resulting from the planning, design or construction of the Project. At the DEPARTMENT's request, the MUNICIPALITY, prior to advertising and letting the Project, shall furnish the DEPARTMENT with evidence of the approvals, permits, licenses and approved environmental documents.

(3) The MUNICIPALITY is encouraged to use the DEPARTMENT's ECMS selection mechanisms to assist it in its consultant selection process.

B. UTILITY CONSIDERATIONS

(1) The MUNICIPALITY shall furnish Project plans to utilities known to have facilities within the Project limits and to all other utilities subsequently discovered within the Project limits.

(2) The MUNICIPALITY shall arrange for any necessary relocation or adjustment of all utility facilities and notify each utility company to relocate any affected facilities to accommodate the construction of the Project. The MUNICIPALITY, with the DEPARTMENT's guidance, shall make these arrangements in accordance with FHWA and DEPARTMENT requirements, as applicable. If any affected utility claims that the MUNICIPALITY is responsible for reimbursing the affected utility for its utility relocation costs pursuant to applicable state or local laws in effect when this Agreement is executed, the MUNICIPALITY shall furnish the DEPARTMENT with Form 4181-A, Preliminary Estimate for Utility Relocation. The utility shall prepare the form, which shall be accompanied by documentation justifying the MUNICIPALITY's legal obligation to reimburse the utility for utility relocation costs actually incurred by the utility. The DEPARTMENT, after review and approval of the cost estimates and documentation, will draft the necessary reimbursement agreement into which the MUNICIPALITY and the utility will enter. The DEPARTMENT will submit the agreement to the MUNICIPALITY for execution by the parties.

(3) If the MUNICIPALITY owns or operates the existing utility facilities, the MUNICIPALITY shall request the DEPARTMENT to determine if the costs are Project-

eligible costs and if so to prepare a supplement to this agreement to address the costs associated with the relocation of said facilities, if not addressed herein. The supplemental agreement will acknowledge that the utility facilities are located in the right-of-way and that the relocation costs are Project-eligible costs.

(4) Prior to advertising the Project for letting, the MUNICIPALITY, on forms provided by the DEPARTMENT, shall furnish a Utility Clearance Certification, Form D-419, attesting that all arrangements have been made for the relocation of all known utility facilities affected by the Project, and which shall include a description of the written arrangements made with the utilities for the relocation of facilities in a manner that will not impede Project construction.

(5) The MUNICIPALITY agrees that all utility facilities transferred to or remaining at a location within the right-of-way of a federal aid highway shall be accommodated in accordance with the most current version of: 23 C.F.R. Part 645; the Federal-Aid Policy Guide Chapter I, Subchapter G, Part 645, Subpart B, *Accommodation of Utilities*, and all subsequent amendments; and, if the utility facilities are being transferred to or remaining at a location within the right-of-way of a state federal-aid highway, 67 Pa Code Chapter 459.

(6) If the Agreement terminates for lack of activity or failure to complete the Project, as provided in Paragraph 22 of the Agreement, after any utility has been authorized to proceed with its relocation work, the MUNICIPALITY, at its sole cost and expense, shall reimburse the utility for its actual and related indirect costs of work completed at the time of termination, plus any additional expenses incurred by the utility in restoring its system to normal operation conditions.

C. APPLICATION TO PENNSYLVANIA PUBLIC UTILITY COMMISSION

The MUNICIPALITY, as necessary, shall make such application to the Pennsylvania Public Utility Commission ("PUC") as required for the construction and completion of the Project. If the Project is a rail-highway crossing bridge under the jurisdiction of the PUC, the DEPARTMENT and the MUNICIPALITY agree to the following:

(1) The DEPARTMENT shall apply any costs contributed voluntarily by a railroad, or allocated to the railroad by the PUC, to help defray the cost of the Project to the MUNICIPALITY's share of the Project cost. If the railroad share exceeds the MUNICIPALITY's share, the excess shall be applied first to the DEPARTMENT's share, if any, and second to the remaining portion of the Project costs.

(2) If the PUC allocates costs to a railroad, and the railroad does not voluntarily agree to contribute the costs allocated to it by the PUC, these costs shall be shared as specified in Paragraphs 9 and 10 of this Agreement.

(3) If the PUC allocates costs to the DEPARTMENT in excess of the DEPARTMENT's share or the remaining part of the Project costs identified in subparagraph (1) above, the MUNICIPALITY agrees to pay these excess costs.

D. RIGHT-OF-WAY ACQUISITION

(1) The MUNICIPALITY certifies that it shall acquire all right-of-way necessary to construct this Project in accordance with all of the applicable federal and/or state laws, policies, and procedures pertinent to right-of-way acquisition, including, but not limited to:

(a) The most current version of DEPARTMENT Publication No. 740; and

(b) Either Procedures for Right-of-Way Acquisition by Municipality Non-Federal, or Procedures for Right-of-Way Acquisition by Municipality-Federal Aid Highway Projects, as applicable, and as attached and made a part of this Agreement as Exhibit "R-1" or "R-2", respectively.

(2) If the MUNICIPALITY must acquire right-of-way to accommodate the Project and the DEPARTMENT determines that the involved costs are eligible project costs, the MUNICIPALITY and the DEPARTMENT shall include the eligible costs for the right-of-way phase in this Agreement, or in a letter of amendment or letter of adjustment, as appropriate.

(3) The MUNICIPALITY may not begin to acquire the necessary right-of-way until the District Right-of-Way Administrator has certified that the MUNICIPALITY has the facilities and qualified personnel to proceed with right-of-way acquisition. If the MUNICIPALITY cannot satisfy the District Right-of-Way Administrator's requirements using the

MUNICIPALITY's personnel, it must make alternative arrangement to the satisfaction of the District Right-of-Way Administrator prior to beginning right-of-way acquisition.

E. RAILROAD CONSIDERATIONS

The MUNICIPALITY shall furnish Project plans to any railroads known to have facilities within the Project limits.

(1) The MUNICIPALITY shall coordinate with the railroad(s) to determine railroad design criteria, arrange for protective services as needed and determine levels of insurance that will be required for the completion of the Project.

(2) The MUNICIPALITY shall coordinate with the railroad(s) to ensure that DEPARTMENT forms D-4279 and D-4279A are completed by the railroad(s) and returned to the DEPARTMENT.

(3) The MUNICIPALITY shall include all railroad special provisions, including, but not limited to, insurance requirements, right-of-entry requirements and private crossing requirements, in the Project bid package.

(4) If there are railroad costs that are Project eligible, they shall be addressed through either a letter of amendment or a letter of adjustment, as provided in Paragraph 4 of this Agreement.

(5) The DEPARTMENT, after review and approval of the cost estimates and documentation, shall draft the necessary reimbursement agreement to be entered into between the MUNICIPALITY and the railroad and will forward the agreement to the MUNICIPALITY for execution. A copy of the executed agreement shall be returned to the DEPARTMENT.

EXHIBIT "C"
**FOR PROJECTS WHERE DEPARTMENT IS RESPONSIBLE FOR MANAGING
PRECONSTRUCTION ACTIVITIES**

These provisions shall apply if the parties have opted, in Paragraph 3 of the Agreement, to which this Exhibit is attached, for the DEPARTMENT to assume responsibility for preconstruction activities for the Project authorized by this Agreement.

A. DESIGN

(1) The DEPARTMENT, with its own forces or by contract, shall design the Project. The design shall be in accordance with policies, procedures and specifications prepared or approved by the DEPARTMENT and the FHWA, including, but not limited to, the most current versions of the following:

- (a) DEPARTMENT Publication No. 70M, *Guidelines for Design of Local Roads and Streets*;
- (b) DEPARTMENT Publication No. 740;
- (c) DEPARTMENT Design Manuals (Publication Nos. 10, 13M, 14M, 15M, and 16M);
- (d) DEPARTMENT Policy Letters;
- (e) DEPARTMENT Form No. 442, *Bureau of Design Specifications for Consultant Agreements*, Division I;
- (f) DEPARTMENT Publication 93, *Policy and Procedures for the Administration of Consultant Agreements*; and
- (f) DEPARTMENT Publication No. 408, *Specifications*, its supplements and amendments.

(2) The DEPARTMENT shall, on behalf of the MUNICIPALITY and in the MUNICIPALITY'S name, prepare all necessary approvals, permits and licenses from all other governmental agencies as may be required to complete the Project. This obligation shall include the responsibility for preparing or revising environmental reports or other documents such as environmental impact statements required by law. The MUNICIPALITY shall cooperate with

the DEPARTMENT as necessary in applying for the approvals, permits and licenses, shall submit the appropriate permit applications as prepared by the DEPARTMENT and shall be responsible for defense of any environmental litigation resulting from the planning, design or construction of the Project. The MUNICIPALITY shall submit all necessary permits prepared by the DEPARTMENT and shall furnish the DEPARTMENT with copies of any and all approvals, permits, licenses and approved environmental documents obtained from other agencies or entities. The MUNICIPALITY will be the applicant and ultimately the permittee or licensee.

B. UTILITY CONSIDERATIONS

(1) The DEPARTMENT shall furnish Project plans to utilities known to have facilities within the Project limits and to all other utilities subsequently discovered within the Project limits.

(2) The DEPARTMENT, in the MUNICIPALITY's name and on its behalf, shall arrange for any necessary relocation or adjustment of all utility facilities and notify each utility company to relocate any affected facilities to accommodate the construction of the Project in accordance with FHWA and DEPARTMENT requirements, as applicable. If any affected utility claims that the MUNICIPALITY is responsible for reimbursing the affected utility for its utility relocation costs pursuant to applicable state or local laws in effect when this Agreement is executed, the DEPARTMENT shall work with the MUNICIPALITY to obtain Form 4181-A, Preliminary Estimate for Utility Relocation. The utility shall prepare the form, which shall be accompanied by documentation justifying the MUNICIPALITY's legal obligation to reimburse the utility for utility relocation costs actually incurred by the utility. The DEPARTMENT, after review and approval of the cost estimates and documentation, will draft the necessary reimbursement agreement into which the MUNICIPALITY and the utility will enter. The DEPARTMENT will submit the agreement to the MUNICIPALITY for execution by the parties.

(3) If the MUNICIPALITY owns or operates the existing utility facilities, the MUNICIPALITY shall request the DEPARTMENT to prepare a supplement to this agreement to address the costs associated with the relocation of said facilities, if not addressed herein. The supplemental agreement will acknowledge the relocation costs are Project-eligible costs.

(4) Prior to advertising the Project for letting, the DEPARTMENT shall furnish a Utility Clearance Certification, Form D-419, attesting that all arrangements have been made for the relocation of all known utility facilities affected by the Project, and which shall include a description of the written arrangements made with the utilities for the relocation of facilities in a manner that will not impede Project construction.

(5) The MUNICIPALITY agrees that all utility facilities transferred to or remaining at a location within the right-of-way of a federal aid highway shall be accommodated in accordance with the most current version of: 23 C.F.R. Part 645; the Federal-Aid Policy Guide Chapter I, Subchapter G, Part 645, Subpart B, *Accommodation of Utilities*, and all subsequent amendments; and, if the utility facilities are being transferred to or remaining at a location within the right-of-way of a state federal-aid highway, 67 Pa Code Chapter 459.

(6) If the Agreement terminates for lack of activity or failure to complete the Project by the MUNICIPALITY or due to the MUNICIPALITY's failure to reimburse the DEPARTMENT pursuant to this Agreement, as provided in Paragraph 22 of the Agreement, after any utility has been authorized to proceed with its relocation work, the MUNICIPALITY, at its sole cost and expense, shall reimburse the utility for its actual and related indirect costs of work completed at the time of termination, plus any additional expenses incurred by the utility in restoring its system to normal operation conditions.

C. APPLICATION TO PENNSYLVANIA PUBLIC UTILITY COMMISSION

The DEPARTMENT, in the name of and on behalf of the MUNICIPALITY, shall, as necessary, prepare such application to the Pennsylvania Public Utility Commission ("PUC") as required for the construction and completion of the Project and provide it to the MUNICIPALITY to submit to the PUC. If the Project is a rail-highway crossing bridge under the jurisdiction of the PUC, the DEPARTMENT and the MUNICIPALITY agree to the following:

(1) The DEPARTMENT shall apply any costs contributed voluntarily by a railroad, or allocated to the railroad by the PUC, to help defray the cost of the Project to the MUNICIPALITY's share of the Project cost. If the railroad share exceeds the MUNICIPALITY's share, the excess shall be applied first to the DEPARTMENT's share, if any, and second to the remaining portion of the Project costs.

(2) If the PUC allocates costs to a railroad, and the railroad does not voluntarily agree to contribute the costs allocated to it by the PUC, these costs shall be shared as specified in Paragraphs 9 and 10 of this Agreement.

(3) If the PUC allocates costs to the DEPARTMENT in excess of the DEPARTMENT's share or the remaining part of the Project costs identified in subparagraph (1) above, the MUNICIPALITY agrees to pay these excess costs.

D. RIGHT-OF-WAY ACQUISITION

(1) The MUNICIPALITY shall, if necessary, adopt an ordinance authorizing the DEPARTMENT to acquire any needed property sufficient to complete the Project on the MUNICIPALITY's behalf. Such ordinance shall be passed within 90 days of execution of this Agreement.

(2) The DEPARTMENT certifies that, as delegated to the DEPARTMENT by the MUNICIPALITY pursuant to ordinance, the DEPARTMENT shall acquire all right-of-way necessary to construct the Project in accordance with all of the applicable state laws, policies and procedures pertinent to right-of-way acquisition; the most current version of DEPARTMENT Publication No. 378, *Right of Way Manual*. The cost of such right-of way shall be an eligible Project cost.

E. RAILROAD CONSIDERATIONS

The DEPARTMENT shall furnish Project plans to any railroads known to have facilities within the Project limits.

(1) The DEPARTMENT shall coordinate with the railroad(s) to determine railroad design criteria, arrange for protective services as needed and determine levels of insurance that will be required for the completion of the Project.

(2) The DEPARTMENT shall coordinate with the railroad(s) to ensure that DEPARTMENT forms D-4279 and D-4279A are completed by the railroad(s) and returned to the DEPARTMENT.

(3) The DEPARTMENT shall include all railroad special provisions, including, but not limited to, insurance requirements, right-of-entry requirements and private crossing requirements, in the Project bid package.

(4) If there are railroad costs that are Project eligible, they shall be addressed through either a letter of amendment or a letter of adjustment, as provided in Paragraph 4 of the Agreement.

(5) The DEPARTMENT, after review and approval of the cost estimates and documentation, shall draft the necessary reimbursement agreement to be entered into between the MUNICIPALITY and the railroad and will forward the agreement to the MUNICIPALITY for execution. A copy of the executed agreement shall be returned to the DEPARTMENT.

SAMPLE LETTER OF AMENDMENT

Date

Municipality/Contractor Name
ATTN: Contact
Address
City, State Zip

Re: Amendment (Amendment Letter Designation)
Agreement # (Contract Number)

Dear : (Mr./Ms. Name)

Per the terms of the subject agreement, the Department is willing to amend the terms by increasing the total project costs from \$ (current dollar amount) to \$ (new dollar amount), as shown in the attached Exhibit " .” This amendment will become effective once all required signatures are affixed to this document.

We are requesting your concurrence as to the amendment of the above referenced agreement. If you agree to the amendment, please indicate below by signing and noting your title where indicated. Please attach a resolution verifying your authorization to sign this letter of amendment.

IF APPLICABLE: Since the date of the Original Agreement, some standard provisions and accompanying exhibits have been updated; copies of these updated Exhibits are attached hereto and hereby supersede and replace the corresponding exhibit attached to the Original Agreement.

Your response is required no later than (Date).

On behalf of the above-named Municipality, I agree to the amendment of the above referenced agreement I agree to all terms and conditions included in the subject agreement and all previous amendments thereto, if any.

Signature:

Title:

All terms and conditions of the agreement and its amendments (if any) not affected by this letter of amendment remain in full force and effect.

This letter of amendment is not effective until the Office of Comptroller Operations signs and dates this letter of amendment. The Department will forward a copy of the fully executed letter of amendment for your files.

Sincerely,

Name, Title
Organization

Exhibit D

Approved for Form and Legality:

_____ Date
for Chief Counsel

_____ Date
Comptroller Signature

Reimbursement Amendment No. _____ is split _____ %, expenditure amount of _____ for federal funds and _____ %, expenditure amount of _____ for state funds. The related federal assistance program name and number is _____ ; _____. The state assistance program name and number is _____ ; _____.

Sample

SAMPLE LETTER OF ADJUSTMENT

Date
Municipality Name
ATTN: Contact
Address
City, State Zip

Re: Amendment (Amendment Number Designation)
Agreement # (Contract Number)

Dear Local Project Sponsor(s):

Per the terms of the subject agreement, the Department will redistribute the costs in the current Estimated Project Cost Exhibit, with no change in the total Project costs, by increasing/decreasing the costs of the phases within the project as shown below and as further detailed in the attached Exhibit " _____," which replaces the current exhibit.

	Current Total Phase Costs	New Phase Costs
Preliminary Engineering	\$	\$
Final Design	\$	\$
Utilities	\$	\$
Right-of-Way	\$	\$
Construction	\$	\$
TOTAL PROJECT COST	\$	\$

All terms and conditions of the agreement and amendments (if any) not affected by this letter of adjustment remain in full force and effect.

If you have any concerns of the redistribution of costs, please contact us within ten (10) days of this notice; otherwise, the redistribution will be processed as detailed above.

This letter of adjustment is not effective until the Office of Comptroller Operations signs and dates this letter of adjustment. The Department will forward a copy of the fully executed letter of adjustment for your files.

Sincerely,

 Project Manager

 (Asst.) District Executive Date

 Office of Comptroller Operations Date

Reimbursement Amendment No. _____ is split _____ %, expenditure amount of _____ for federal funds and _____ %, expenditure amount of _____ for state funds. The related federal assistance program and number is _____ ; _____ . The state assistance program name and number is _____ ; _____ .

Exhibit E

PLANS, SPECIFICATIONS, ESTIMATES AND BID PROPOSAL PACKAGE

*(some items applicable depending on funding source –
please check with District for your particular project)*

A. Plans and Estimates

Title Sheet Mylar or Vellum (for signatures)
All Original Plan Sheets
Engineer's Estimate (D-407)
Federal Estimate
Trainee Calculation

**B. Bid Proposal and Specifications (to prospective bidders)
Standard Proposal/Contract Documents**

Signatures with certifications or anticollusion affidavits
Bid items with work class codes

C. Special Provisions

Pre-Bid Conference
Award of Contract
Anticipated Notice to Proceed Date
Minority Business Enterprise Program
Equal Employment Opportunity Reporting Requirements
Affirmative Action Requirements Equal Employment Opportunity
Sworn Affidavit
Utilities
Specifications
General Contract Conditions
Governing Specifications for state funded projects
Public Works

D. Attachments

D-476—Distribution of Contract Time
Notice
Prevailing Minimum Wage, if applicable
PR-47 (only required for projects over \$500,000)
F.A.R.—C.A. Required Contract Provisions Federal-Aid Construction Contracts
Notice to Prospective Federal-Aid Construction Contractor
Special Supplement—Anti-Pollution Measures

February 24, 2015

NONDISCRIMINATION/SEXUAL HARASSMENT CLAUSE
(applies only to agreement involving no federal funds)

The Contractor agrees:

- 1.** In the hiring of any employee(s) for the manufacture of supplies, performance of work, or any other activity required under the contract or any subcontract, the Contractor, each subcontractor, or any person acting on behalf of the Contractor or subcontractor shall not, discriminate in violation of the *Pennsylvania Human Relations Act (PHRA)* and applicable federal laws against any citizen of this Commonwealth who is qualified and available to perform the work to which the employment relates.
- 2.** Neither the Contractor nor any subcontractor nor any person on their behalf shall in any manner discriminate in violation of the PHRA and applicable federal laws against or intimidate any employee involved in the manufacture of supplies, the performance of work, or any other activity required under the contract.
- 3.** The Contractor and each subcontractor shall establish and maintain a written nondiscrimination and sexual harassment policy and shall inform their employees of the policy. The policy must contain a provision that sexual harassment will not be tolerated and employees who practice it will be disciplined. Posting this Nondiscrimination/Sexual Harassment Clause conspicuously in easily-accessible and well-lighted places customarily frequented by employees and at or near where the contract services are performed shall satisfy this requirement.
- 4.** The Contractor and each subcontractor shall not discriminate in violation of PHRA and applicable federal laws against any subcontractor or supplier who is qualified to perform the work to which the contracts relates.
- 5.** The Contractor and each subcontractor represents that it is presently in compliance with and will maintain compliance with all applicable federal, state, and local laws and regulations relating to nondiscrimination and sexual harassment. The Contractor and each subcontractor further represents that it has filed a Standard Form 100 Employer Information Report ("EEO-1") with the U.S. Equal Employment Opportunity Commission ("EEOC") and shall file an annual EEO-1 report with the EEOC as required for employers subject to Title VII of the Civil Rights Act of 1964, as amended, that have 100 or more employees and employers that have federal government contracts or first-tier subcontracts and have 50 or more employees. The Contractor and each subcontractor shall, upon request and within the time periods requested by the Commonwealth, furnish all necessary employment documents and records, including EEO-1 reports, and permit access to their books, records, and accounts by the contracting agency and the Bureau of Small Business Opportunities (BSBO), for purpose of ascertaining compliance with provisions of this Nondiscrimination/Sexual Harassment Clause.

EXHIBIT GI

6. The Contractor shall include the provisions of this Nondiscrimination/Sexual Harassment Clause in every subcontract so that those provisions applicable to subcontractors will be binding upon each subcontractor.
7. The Contractor's and each subcontractor's obligations pursuant to these provisions are ongoing from and after the effective date of the contract through the termination date thereof. Accordingly, the Contractor and each subcontractor shall have an obligation to inform the Commonwealth if, at any time during the term of the contract, it becomes aware of any actions or occurrences that would result in violation of these provisions.
8. The Commonwealth may cancel or terminate the contract and all money due or to become due under the contract may be forfeited for a violation of the terms and conditions of this Nondiscrimination/Sexual Harassment Clause. In addition, the agency may proceed with debarment or suspension and may place the Contractor in the Contractor Responsibility File.

**FEDERAL NONDISCRIMINATION AND
EQUAL EMPLOYMENT OPPORTUNITY CLAUSES
(All Federal Aid Contracts)* (1-76)**

Selection of Labor: During the performance of this contract, the contractor shall not discriminate against labor from any other State, possession or territory of the United States.

1. **Employment Practices:** During the performance of this contract, the contractor agrees as follows:
 - a. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoffs or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notice to be provided by the State highway department setting forth the provisions of this nondiscrimination clause.
 - b. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
 - c. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the State highway department advising the said labor union or workers' representative of the contractors commitments under section 2 and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
 - d. The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations (41 CFR, Part 60) and relevant orders of the Secretary of Labor.
 - e. The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records and accounts by the Federal Highway Administration and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.
 - f. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations or orders, this contract may be canceled, terminated or suspended in whole or part and the contractor may be declared ineligible for further Government contracts or Federally-assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by law.
 - g. The contractor will include the provisions of Section 2 in every subcontract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the State highway department or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with litigation with a subcontractor or vendor as a result of such direction by the Federal Highway Administration, the contractor may request the United States to enter into such litigation to protect the interests of the United States.
2. **Selection of Subcontractors, Procurement of Materials, and Leasing of Equipment:** During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

Applies only to Agreements involving federal funds

- a. **Compliance with Regulations:** The contractor shall comply with the Regulations relative to nondiscrimination in federally-assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations) which are herein incorporated by reference and made a part of this contract.
- b. **Nondiscrimination:** The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, sex or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in the Regulations.
- c. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontract or supplier shall be notified by the contract of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, sex or national origin.
- d. **Information and Reports:** The contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information and its facilities as may be determined by the State highway department or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the State highway department, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.
- e. **Sanctions for Noncompliance:** In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the State highway department shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
 - (1) withholding of payments to the contractor under the contract until the contractor complies, and/or
 - (2) cancellation, termination or suspension of the contract, in whole or in part.
- f. **Incorporation of Provisions:** The contractor shall include the provisions of this paragraph 3 in every subcontract, including procurements of materials and leases of equipment, unless except by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontractor or procurement as the State highway department or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the State highway department or enter into such litigation to protect the interest of the State, and , in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

Wherever hereinabove the word "contractor" is used, it shall also include the word engineer, consultant, researcher, or other entity (governmental, corporate, or otherwise), its successors and assigns as may be appropriate.

*Not to be used if otherwise included in Construction or Appalachian Contract Provision

CONTRACTOR INTEGRITY PROVISIONS

It is essential that those who seek to contract with the Commonwealth of Pennsylvania ("Commonwealth") observe high standards of honesty and integrity. They must conduct themselves in a manner that fosters public confidence in the integrity of the Commonwealth contracting and procurement process.

1. DEFINITIONS. For purposes of these Contractor Integrity Provisions, the following terms shall have the meanings found in this Section:

- a. **"Affiliate"** means two or more entities where (a) a parent entity owns more than fifty percent of the voting stock of each of the entities; or (b) a common shareholder or group of shareholders owns more than fifty percent of the voting stock of each of the entities; or (c) the entities have a common proprietor or general partner.
- b. **"Consent"** means written permission signed by a duly authorized officer or employee of the Commonwealth, provided that where the material facts have been disclosed, in writing, by prequalification, bid, proposal, or contractual terms, the Commonwealth shall be deemed to have consented by virtue of the execution of this contract.
- c. **"Contractor"** means the individual or entity, that has entered into this contract with the Commonwealth.
- d. **"Contractor Related Parties"** means any affiliates of the Contractor and the Contractor's executive officers, Pennsylvania officers and directors, or owners of 5 percent or more interest in the Contractor.
- e. **"Financial Interest"** means either:
 - (1) Ownership of more than a five percent interest in any business; or
 - (2) Holding a position as an officer, director, trustee, partner, employee, or holding any position of management.
- f. **"Gratuity"** means tendering, giving, or providing anything of more than nominal monetary value including, but not limited to, cash, travel, entertainment, gifts, meals, lodging, loans, subscriptions, advances, deposits of money, services, employment, or contracts of any kind. The exceptions set forth in the Governor's Code of Conduct, Executive Order 1980-18 , the 4 Pa. Code §7.153(b), shall apply.
- g. **"Non-bid Basis"** means a contract awarded or executed by the Commonwealth with Contractor without seeking bids or proposals from any other potential bidder or offeror.

2. In furtherance of this policy, Contractor agrees to the following:

- a. Contractor shall maintain the highest standards of honesty and integrity during the performance of this contract and shall take no action in violation of state or federal laws or regulations or any other applicable laws or regulations, or other requirements applicable to Contractor or that govern contracting or procurement with the Commonwealth.

EXHIBIT H

- b.** Contractor shall establish and implement a written business integrity policy, which includes, at a minimum, the requirements of these provisions as they relate to the Contractor activity with the Commonwealth and Commonwealth employees and which is made known to all Contractor employees. Posting these Contractor Integrity Provisions conspicuously in easily-accessible and well-lighted places customarily frequented by employees and at or near where the contract services are performed shall satisfy this requirement.
- c.** Contractor, its affiliates, agents, employees and anyone in privity with Contractor shall not accept, agree to give, offer, confer, or agree to confer or promise to confer, directly or indirectly, any gratuity or pecuniary benefit to any person, or to influence or attempt to influence any person in violation of any federal or state law, regulation, executive order of the Governor of Pennsylvania, statement of policy, management directive or any other published standard of the Commonwealth in connection with performance of work under this contract, except as provided in this contract.
- d.** Contractor shall not have a financial interest in any other contractor, subcontractor, or supplier providing services, labor, or material under this contract, unless the financial interest is disclosed to the Commonwealth in writing and the Commonwealth consents to Contractor's financial interest prior to Commonwealth execution of the contract. Contractor shall disclose the financial interest to the Commonwealth at the time of bid or proposal submission, or if no bids or proposals are solicited, no later than Contractor's submission of the contract signed by Contractor.
- e.** Contractor certifies to the best of its knowledge and belief that within the last five (5) years Contractor or Contractor Related Parties have not:
 - (1)** been indicted or convicted of a crime involving moral turpitude or business honesty or integrity in any jurisdiction;
 - (2)** been suspended, debarred or otherwise disqualified from entering into any contract with any governmental agency;
 - (3)** had any business license or professional license suspended or revoked;
 - (4)** had any sanction or finding of fact imposed as a result of a judicial or administrative proceeding related to fraud, extortion, bribery, bid rigging, embezzlement, misrepresentation or anti-trust; and
 - (5)** been, and is not currently, the subject of a criminal investigation by any federal, state or local prosecuting or investigative agency and/or civil anti-trust investigation by any federal, state or local prosecuting or investigative agency.

If Contractor cannot so certify to the above, then it must submit along with its bid, proposal or contract a written explanation of why such certification cannot be made and the Commonwealth will determine whether a contract may be entered into with the Contractor. The Contractor's obligation pursuant to this certification is ongoing from and after the effective date of the contract through the termination date thereof. Accordingly, the Contractor shall have an obligation to immediately notify the Commonwealth in writing if at any time during the term of the contract if becomes aware of any event which would cause the Contractor's certification or explanation to change. Contractor acknowledges that the Commonwealth may, in its sole discretion, terminate the contract for cause if it learns that any of the certifications made herein are currently false due to intervening factual circumstances or were false or should have been known to be false when entering into the contract.

EXHIBIT H

- f.** Contractor shall comply with the requirements of the *Lobbying Disclosure Act (65 Pa.C.S. §13A01 et seq.)* regardless of the method of award. If this contract was awarded on a Non-bid Basis, Contractor must also comply with the requirements of the *Section 1641 of the Pennsylvania Election Code (25 P.S. §3260a)*.
- g.** When Contractor has reason to believe that any breach of ethical standards as set forth in law, the Governor's Code of Conduct, or these Contractor Integrity Provisions has occurred or may occur, including but not limited to contact by a Commonwealth officer or employee which, if acted upon, would violate such ethical standards, Contractor shall immediately notify the Commonwealth contracting officer or the Office of the State Inspector General in writing.
- h.** Contractor, by submission of its bid or proposal and/or execution of this contract and by the submission of any bills, invoices or requests for payment pursuant to the contract, certifies and represents that it has not violated any of these Contractor Integrity Provisions in connection with the submission of the bid or proposal, during any contract negotiations or during the term of the contract, to include any extensions thereof. Contractor shall immediately notify the Commonwealth in writing of any actions for occurrences that would result in a violation of these Contractor Integrity Provisions. Contractor agrees to reimburse the Commonwealth for the reasonable costs of investigation incurred by the Office of the State Inspector General for investigations of the Contractor's compliance with the terms of this or any other agreement between the Contractor and the Commonwealth that results in the suspension or debarment of the Contractor. Contractor shall not be responsible for investigative costs for investigations that do not result in the Contractor's suspension or debarment.
- i.** Contractor shall cooperate with the Office of the State Inspector General in its investigation of any alleged Commonwealth agency or employee breach of ethical standards and any alleged Contractor non-compliance with these Contractor Integrity Provisions. Contractor agrees to make identified Contractor employees available for interviews at reasonable times and places. Contractor, upon the inquiry or request of an Inspector General, shall provide, or if appropriate, make promptly available for inspection or copying, any information of any type or form deemed relevant by the Office of the State Inspector General to Contractor's integrity and compliance with these provisions. Such information may include, but shall not be limited to, Contractor's business or financial records, documents or files of any type or form that refer to or concern this contract. Contractor shall incorporate this paragraph in any agreement, contract or subcontract it enters into in the course of the performance of this contract/agreement solely for the purpose of obtaining subcontractor compliance with this provision. The incorporation of this provision in a subcontract shall not create privity of contract between the Commonwealth and any such subcontractor, and no third party beneficiaries shall be created thereby.
- j.** For violation of any of these Contractor Integrity Provisions, the Commonwealth may terminate this and any other contract with Contractor, claim liquidated damages in an amount equal to the value of anything received in breach of these Provisions, claim damages for all additional costs and expenses incurred in obtaining another contractor to complete performance under this contract, and debar and suspend Contractor from doing business with the Commonwealth. These rights and remedies are cumulative, and the use or non-use of any one shall not preclude the use of all or any other. These rights and remedies are in addition to those the Commonwealth may have under law, statute, regulation, or otherwise.

EXHIBIT H

October 14, 2011

PROVISIONS CONCERNING THE AMERICANS WITH DISABILITIES ACT

For the purpose of these provisions, the term contractor is defined as any person, including, but not limited to, a bidder, offeror, supplier, or grantee, who will furnish or perform or seeks to furnish or perform, goods, supplies, services, construction or other activity, under a purchase order, contract, or grant with the Commonwealth of Pennsylvania (Commonwealth).

During the term of this agreement, the contractor agrees as follows:

1. Pursuant to federal regulations promulgated under the authority of the *Americans with Disabilities Act, 28 C. F. R. § 35.101 et seq.*, the contractor understands and agrees that no individual with a disability shall, on the basis of the disability, be excluded from participation in this agreement or from activities provided for under this agreement. As a condition of accepting and executing this agreement, the contractor agrees to comply with the *"General Prohibitions Against Discrimination," 28 C. F. R. § 35.130*, and all other regulations promulgated under *Title II* of the *Americans with Disabilities Act* which are applicable to the benefits, services, programs, and activities provided by the Commonwealth through contracts with outside contractors.
2. The contractor shall be responsible for and agrees to indemnify and hold harmless the Commonwealth from all losses, damages, expenses, claims, demands, suits, and actions brought by any party against the Commonwealth as a result of the contractor's failure to comply with the provisions of paragraph 1.

EXHIBIT I

October 25, 2010

Contractor Responsibility Provisions

For the purpose of these provisions, the term contractor is defined as any person, including, but not limited to, a bidder, offeror, loan recipient, grantee or lessor, who has furnished or performed or seeks to furnish or perform, goods, supplies, services, leased space, construction or other activity, under a contract, grant, lease, purchase order or reimbursement agreement with the Commonwealth of Pennsylvania (Commonwealth). The term contractor includes a permittee, licensee, or any agency, political subdivision, instrumentality, public authority, or other public entity in the Commonwealth.

1. The Contractor certifies, in writing, for itself and its subcontractors required to be disclosed or approved by the Commonwealth, that as of the date of its execution of this Bid/Contract, that neither the Contractor, nor any such subcontractors, are under suspension or debarment by the Commonwealth or any governmental entity, instrumentality, or authority and, if the Contractor cannot so certify, then it agrees to submit, along with its Bid/Contract, a written explanation of why such certification cannot be made.

2. The Contractor also certifies, in writing, that as of the date of its execution of this Bid/Contract it has no tax liabilities or other Commonwealth obligations, or has filed a timely administrative or judicial appeal if such liabilities or obligations exist, or is subject to a duly approved deferred payment plan if such liabilities exist.

3. The Contractor's obligations pursuant to these provisions are ongoing from and after the effective date of the Contract through the termination date thereof. Accordingly, the Contractor shall have an obligation to inform the Commonwealth if, at any time during the term of the Contract, it becomes delinquent in the payment of taxes, or other Commonwealth obligations, or if it or, to the best knowledge of the Contractor, any of its subcontractors are suspended or debarred by the Commonwealth, the federal government, or any other state or governmental entity. Such notification shall be made within 15 days of the date of suspension or debarment.

4. The failure of the Contractor to notify the Commonwealth of its suspension or debarment by the Commonwealth, any other state, or the federal government shall constitute an event of default of the Contract with the Commonwealth.

5. The Contractor agrees to reimburse the Commonwealth for the reasonable costs of investigation incurred by the Office of State Inspector General for investigations of the Contractor's compliance with the terms of this or any other agreement between the Contractor and the Commonwealth that results in the suspension or debarment of the contractor. Such costs shall include, but shall not be limited to, salaries of investigators, including overtime; travel and lodging expenses; and expert witness and documentary fees. The Contractor shall not be responsible for investigative costs for investigations that do not result in the Contractor's suspension or debarment.

6. The Contractor may obtain a current list of suspended and debarred Commonwealth contractors by either searching the Internet at <http://www.dgs.state.pa.us/> or contacting the:

Department of General Services
Office of Chief Counsel
603 North Office Building
Harrisburg, PA 17125
Telephone No: (717) 783-6472
FAX No: (717) 787-9138

Exhibit J

Contract Provisions – Right to Know Law

- a. The Pennsylvania Right-to-Know Law, 65 P.S. §§ 67.101-3104, (“RTKL”) applies to this Contract. For the purpose of these provisions, the term “the Commonwealth” shall refer to the contracting Commonwealth agency.
- b. If the Commonwealth needs the Contractor’s assistance in any matter arising out of the RTKL related to this Contract, it shall notify the Contractor using the legal contact information provided in this Contract. The Contractor, at any time, may designate a different contact for such purpose upon reasonable prior written notice to the Commonwealth.
- c. Upon written notification from the Commonwealth that it requires the Contractor’s assistance in responding to a request under the RTKL for information related to this Contract that may be in the Contractor’s possession, constituting, or alleged to constitute, a public record in accordance with the RTKL (“Requested Information”), the Contractor shall:
1. Provide the Commonwealth, within ten (10) calendar days after receipt of written notification, access to, and copies of, any document or information in the Contractor’s possession arising out of this Contract that the Commonwealth reasonably believes is Requested Information and may be a public record under the RTKL; and
 2. Provide such other assistance as the Commonwealth may reasonably request, in order to comply with the RTKL with respect to this Contract.
- d. If the Contractor considers the Requested Information to include a request for a Trade Secret or Confidential Proprietary Information, as those terms are defined by the RTKL, or other information that the Contractor considers exempt from production under the RTKL, the Contractor must notify the Commonwealth and provide, within seven (7) calendar days of receiving the written notification, a written statement signed by a representative of the Contractor explaining why the requested material is exempt from public disclosure under the RTKL.
- e. The Commonwealth will rely upon the written statement from the Contractor in denying a RTKL request for the Requested Information unless the Commonwealth determines that the Requested Information is clearly not protected from disclosure under the RTKL. Should the Commonwealth determine that the Requested Information is clearly not exempt from disclosure, the Contractor shall provide the Requested Information within five (5) business days of receipt of written notification of the Commonwealth’s determination.
- f. If the Contractor fails to provide the Requested Information within the time period required by these provisions, the Contractor shall indemnify and hold the Commonwealth harmless for any damages, penalties, costs, detriment or harm that the Commonwealth may incur as a result of the Contractor’s failure, including any statutory damages assessed against the Commonwealth.

g. The Commonwealth will reimburse the Contractor for any costs associated with complying with these provisions only to the extent allowed under the fee schedule established by the Office of Open Records or as otherwise provided by the RTKL if the fee schedule is inapplicable.

h. The Contractor may file a legal challenge to any Commonwealth decision to release a record to the public with the Office of Open Records, or in the Pennsylvania Courts, however, the Contractor shall indemnify the Commonwealth for any legal expenses incurred by the Commonwealth as a result of such a challenge and shall hold the Commonwealth harmless for any damages, penalties, costs, detriment or harm that the Commonwealth may incur as a result of the Contractor's failure, including any statutory damages assessed against the Commonwealth, regardless of the outcome of such legal challenge. As between the parties, the Contractor agrees to waive all rights or remedies that may be available to it as a result of the Commonwealth's disclosure of Requested Information pursuant to the RTKL.

i. The Contractor's duties relating to the RTKL are continuing duties that survive the expiration of this Contract and shall continue as long as the Contractor has Requested Information in its possession.

FEDERAL FUNDING ACCOUNTABILITY AND TRANSPARENCY ACT (FFATA)

The Subgrantee must complete Federal Funding Accountability and Transparency Act (FFATA) form attached here. This form is to be completed and incorporated as part of this agreement.

Failure to provide accurate information for the Subgrantee named as a party to this agreement or to complete the FFATA form will cause the inability of the Commonwealth to process this grant and resulting in delay or loss of funds to the Subgrantee. The Subgrantee's documentation will be considered incomplete until such time that Subgrantee provides accurate FFATA information.

- (a) Registration and Identification Information – The Subgrantee must maintain current registration in the Central Contractor Registration (www.ccr.gov) at all times during which they have active federal awards funded pursuant to this agreement. A Dun and Bradstreet Data Universal Numbering System (DUNS) Number (www.dnb.com) is one of the requirements for registration in the Central Contractor Registration. Subgrantee must provide its DUNS number, and DUNS + 4 number if applicable, to the Commonwealth along with the signed grant agreement.
- (b) Primary Location - Subgrantee must provide to the Commonwealth the primary location of performance under the award, including the city, State, and zip+4. If performance is to occur in multiple locations, then Subgrantee must list the location where the most amount of the grant award is to be expended pursuant to this grant agreement.
- (c) Compensation of Officers - Subgrantee must provide to the Commonwealth the names and total compensation of the five most highly compensated officers of the entity if-
 1. the entity in the preceding fiscal year received—
 - a. 80 percent or more of its annual gross revenues in Federal awards; and
 - b. \$25,000,000 or more in annual gross revenues from Federal awards; and
 - c. the public does not have access to information about the compensation of the senior executives of the entity through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. If the Subgrantee does not meet the conditions listed above, then it must specifically affirm to the Commonwealth that the requirements of this clause are inapplicable to the Subgrantee. Subgrantee must provide information responding to this question along with Subgrantee's return of the signed grant agreement. The Commonwealth will not process this grant until such time that Subgrantee provides such information responding to this question.

Federal Funding Accountability and Transparency Act Sub-recipient Data Sheet

Grantee must provide information along with Grantee's return of the signed grant agreement. The Commonwealth will not process the grant until such time that Grantee provides such information.

DUNS NUMBER

DUNS Number:

--

DUNS Number +4 (if applicable)

--

[INSTRUCTIONS: Grantee must provide its assigned DUNS number, and DUNS + 4 number if applicable. Grantee must maintain current registration in the Central Contractor Registration (www.ccr.gov) at all times during which they have active federal awards funded pursuant to their sub- grant agreement. A Dun and Bradstreet Data Universal Numbering System (DUNS) Number (www.dnb.com) is one of the requirements for registration in the Central Contractor Registration.]

PRIMARY LOCATION

City:

--

State:

--

Zip+4:

--

[INSTRUCTIONS: Grantee must provide to the Commonwealth the primary location of performance under the award, including the city, State, and zip code including 4-digit extension. If performance is to occur in multiple locations, then Grantee must list the location where the most amount of the grant award is to be expended pursuant to the grant agreement.]

COMPENSATION OF OFFICERS

Officer 1 Name:

Officer 1 Compensation:

Officer 2 Name:

Officer 2 Compensation:

Officer 3 Name:

Officer 3 Compensation:

Officer 4 Name:

Officer 4 Compensation:

Officer 5 Name:

Officer 5 Compensation:

By marking the following box Grantee affirms they do not meet the conditions for reporting highly compensated officials

[INSTRUCTIONS: Grantee must provide to the Commonwealth the names and total compensation of the five most highly compensated officers of the entity if--

(i) the entity in the preceding fiscal year received—

(I) 0 percent or more of its annual gross revenues in Federal awards; and

(II) 0,000 or more in annual gross revenues from Federal awards: and

(ii) the public does not have access to information about the compensation of the senior executives of the entity through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986.

If the Grantee does not meet the conditions listed above, then it must specifically affirm to the Commonwealth that the requirements of this clause are inapplicable to the Grantee.

LOBBYING CERTIFICATION FORM

(applies only if Agreement is Federally Funded)

[Exhibit needs to be printed, completed offline, and then scanned and attached]

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, Disclosure of Lobbying Activities, in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed under *Section 1352, Title 31, U. S. Code*. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for such failure.

SIGNATURE: Michael Gable

TITLE: Director

DATE: November 30, 2015

Exhibit M

Applies only if Agreement is federally-funded

**AUDIT CLAUSE TO BE USED IN AGREEMENTS WITH SUBRECIPIENTS
RECEIVING FEDERAL AWARDS FROM THE COMMONWEALTH**

The [NAME OF SUBRECIPIENT] must comply with all federal and state audit requirements including: *The Single Audit Act Amendments of 1996; 2 CFR Part 200 as amended*; and any other applicable law or regulation, and any amendment to such other applicable law or regulation which may be enacted or promulgated by the federal government.

If the [NAME OF SUBRECIPIENT] is a local government or non-profit organization that expends \$750,000 or more in federal awards during its fiscal year, the [NAME OF SUBRECIPIENT] is required to provide the appropriate single or program specific audit in accordance with the provisions outlined in *2 CFR Part 200.501*.

If the [NAME OF SUBRECIPIENT] expends total federal awards of less than the threshold established by 2 CFR 200.501, it is exempt from federal audit requirements for that year, but records must be available for review or audit by appropriate officials (or designees) of the federal agency, pass-through entity, and Government Accountability Office (GAO).

If the [NAME OF SUBRECIPIENT] is a for-profit entity, it is not subject to the auditing and reporting requirements of *2 CFR Part 200, Subpart F - Audit Requirements (Subpart F)*. However, the pass-through commonwealth agency is responsible for establishing requirements, as necessary, to ensure compliance by for-profit subrecipients. The contract with the for-profit subrecipient should describe applicable compliance requirements and the for-profit subrecipient's compliance responsibility. Methods to ensure compliance for federal awards made to for-profit subrecipients may include pre-award audits, monitoring during the contract and post-award audits. The post-award audits may be in the form of a financial audit in accordance with *Government Auditing Standards*, a single audit report or program-specific audit report in accordance with *Subpart F*. However, these post-award audits must be submitted directly to the affected commonwealth agency that provided the funding. Only single audit reports for local governmental and non-profit subrecipients are electronically submitted to the Federal Audit Clearinghouse.

**ADDITIONAL POTENTIAL COMPONENTS OF THE SINGLE AUDIT REPORTING
PACKAGE.**

In instances where a federal program-specific audit guide is available, the audit report package for a program-specific audit may be different and should be prepared in accordance with the appropriate audit guide, *Government Auditing Standards*, and *Subpart F*.

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In addition to the requirements of *Subpart F*, commonwealth agencies may require that the single audit reporting packages include additional components in the SEFA, or supplemental schedules, as identified through the respective grant agreement.

SUBMISSION OF THE AUDIT REPORT

The [NAME OF SUBRECIPIENT] must submit an electronic copy of the audit report package to the Federal Audit Clearinghouse, which shall include the elements outlined in *Subpart F*.

SUBMISSION OF THE FEDERAL AUDIT CLEARINGHOUSE CONFIRMATION

The subrecipients must send a copy of the confirmation from the Federal Audit Clearinghouse to the resource account RA-BOASingleAudit@pa.gov.

AUDIT OVERSIGHT PROVISIONS.

The [NAME OF SUBRECIPIENT] is responsible for obtaining the necessary audit and securing the services of a certified public accountant or independent governmental auditor.

The commonwealth reserves the right for federal and state agencies or their authorized representatives to perform additional audits of a financial or performance nature, if deemed necessary by commonwealth or federal agencies. Any such additional audit work will rely on work already performed by the [NAME OF SUBRECIPIENT]'s auditor and the costs for any additional work performed by the federal or state agencies will be borne by those agencies at no additional expense to the [NAME OF SUBRECIPIENT].

Audit documentation and audit reports must be retained by the [NAME OF SUBRECIPIENT]'s auditor for a minimum of five years from the date of issuance of the audit report, unless the [NAME OF SUBRECIPIENT]'s auditor is notified in writing by the commonwealth, the cognizant federal agency for audit, or the oversight federal agency for audit to extend the retention period. Audit documentation will be made available upon request to authorized representatives of the commonwealth, the cognizant federal agency for audit, the oversight federal agency for audit, the federal funding agency, or the GAO.

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Disadvantaged Business Enterprise & Small Business Concern Involvement

The Commonwealth of Pennsylvania is committed to providing opportunities for Disadvantaged Business Enterprises and small business concerns to compete for work. Small business concerns are those entities seeking to participate in Commonwealth contracts that meet the definition of a small business concern set forth in Section 3 of the Small Business Act and Small Business regulations implementing it at 13 C.F.R. Part 121. Contractors are encouraged to involve Disadvantaged Business Enterprises and small business concerns in the required work and to submit documentation of any such involvement in the proposal/project.

January 2, 2002

**DISADVANTAGED BUSINESS ENTERPRISE REQUIREMENTS
– Prequalification Exempt**

1. POLICY

- A. The Pennsylvania Department of Transportation (PennDOT) does not discriminate on the basis of race, color, national origin or sex. It is the policy of PennDOT and the United States Department of Transportation that Disadvantaged Business Enterprises (DBEs) be given the opportunity to participate in the performance of contracts financed, in whole or in part, with federal funds.
- B. The requirement of 49 CFR 26 apply to this contract.
- C. Only DBE firms certified by PennDOT count toward the DBE Goal.

2. DEFINITIONS

- A. Disadvantaged Business Enterprise or DBE means a for-profit small business concern:
 - 1) That is at least 51 percent owned by one or more individuals who are both socially and economically disadvantaged or, in the case of a corporation, in which 51 percent of the stock is owned by one or more such individuals; and
 - 2) Whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.
- B. Small business concern means, with respect to firms seeking to participate as DBEs in DOT-assisted contracts, a small business concern as defined pursuant to section 3 of the Small Business Act and Small Business Administration regulations implementing it (13 CFR part 121) that also does not exceed the cap on average annual gross receipts specified in §26.65(b).
- C. Socially and economically disadvantaged individual means any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who is:
 - 1) Any individual in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:
 - i) "Black Americans," which includes persons having origins in any of the Black racial groups of Africa;
 - ii) "Hispanic Americans," which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;
 - iii) "Native Americans," which includes persons who are American Indians, Eskimos, Aleuts, or Native Hawaiians;
 - iv) "Asian-Pacific Americans," which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), the

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Commonwealth of the Northern Marianas Islands, Macao, Fiji, Tonga, Kirbati, Juvalu, Nauru, Federated States of Micronesia, or Hong Kong;

v) "Subcontinent Asian Americans," which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka;

vi) Women;

vii) Any additional groups whose members are designated as socially and economically disadvantaged by the SBA, at such time as the SBA designation becomes effective.

2) Any individual who the Department finds to be a socially and economically disadvantaged individual on a case-by-case basis.

D. DBE Goal means the amount of DBE participation stated by PennDOT in the proposal. This DBE Goal is stated in terms of total project cost and is based on the project's potential for subcontracted work and the availability of DBEs to perform such subcontract work.

E. Certified DBE means those firms certified by PennDOT's Bureau of Equal Opportunity. Refer to PennDOT's Disadvantaged Business Enterprise Directory. For information regarding DBE Certification, please see our web site at www.dot.state.pa.us or contact the Bureau's DBE Division at 1-800-468-4201 or (717) 787-5891.

3. FAILURE TO COMPLY WITH DBE REQUIREMENTS

A. Failure of a bidder to meet the DBE Goal and failure to provide a verifiable "good faith effort" in a response to the proposal will result in rejection of the bid. Furthermore, if PennDOT does not approve the "good faith effort", the bid will be rejected.

B. Failure by a prime contractor and subcontractors to carry out the DBE requirements constitutes a breach of contract and may result in termination of the contract or action as appropriate.

C. Upon completion of the project, PennDOT will review the actual DBE expenditures to determine compliance with the DBE Goal. If the DBE Goal is not met, written explanation from the contractor will be reviewed by PennDOT. If the shortfall in meeting the DBE Goal is determined to be unjustified and unwarranted, PennDOT may impose sanction as appropriate.

D. Failure to comply with any DBE requirements may result in termination of the contract, being barred from bidding on PennDOT contracts for up to three years, or any other remedy, as PennDOT deems appropriate.

4. PROCEDURES

A. In response to the proposal, the bidder must make a "good faith effort" to subcontract a portion of the project work to a certified DBEs. This portion should be equal to or greater than the DBE Goal stated in the proposal. Efforts to subcontract work include but are not limited to:

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- 1) Efforts made to solicit through all reasonable and available means (e.g. use of the DBE Directory, attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must provide written notification, at least 15 calendar days prior to the bid due date, to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.
- 2) Efforts made to select portions of the work to be performed by DBEs in order to increase the likelihood that the DBE Goal will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.
- 3) Efforts made to provide interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- 4) Efforts made to negotiate in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE Goal, as long as such costs are reasonable. Also, the ability or desire of a bidder to perform the work of a contract with its own work force does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.
- 5) Failure to accept DBE as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the contractor's efforts to meet the DBE Goal.
- 6) Efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.
- 7) Efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
- 8) Efforts to effectively use the Department's DBE Supportive Services Contractors, services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance

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offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

- B. The bidder is prohibited from requiring any DBE to agree not to provide subcontracted effort to other bidders.
- C. The bidder must submit Form(s) EO-380 meeting the DBE Goal, indicating the name of the DBE(s), contact person, phone number, PennDOT DBE Certification Number, expiration date, and a narrative description of the service to be provided by the DBE(s) with the bid. Failure to submit Form EO-380 with the bid will result in the rejection of the bid.
- D. If a DBE cannot be located or if the percent of bid allocated to the DBE(s) is less than the DBE Goal, the bidder must provide a "good faith effort" in as mentioned Section 4-A, with the bid. Failure to submit the "good faith effort", if required, will result in the rejection of the bid. The "good faith effort" must explain and document the effort made by the bidder to obtain DBE participation. Documentation must be verifiable and must include:
 - 1) The names, addresses and phone numbers of DBEs, DBE assistance agencies and general circulation media who were contacted, the dates of initial contact and the follow-up efforts made by the prime contractor;
 - 2) A description of the information provided to the DBE, DBE assistance agency or general circulation media to define the work to be performed;
 - 3) Documentation of the reasons why any DBE contacted would not agree to participate.
- E. If the low bid contains a "good faith effort" because the low bidder failed to meet the established DBE Goal, PennDOT will review the "good faith effort" provided. If the "good faith effort" is deemed to be satisfactory, the "good faith effort" will be approved. In such a case the contractor shall continue a "good faith effort" throughout the life of the contract to increase the DBE participation to meet the contract DBE Goal. If PennDOT cannot accept the "good faith effort" submitted by the low bidder, the bid will be considered non-responsive and PennDOT will notify the low bidder that the bid is rejected.
- F. Any low bid that does not meet the DBE Goal and does not provide a "good faith effort" which identified DBEs, DBE referral/assistance agencies and others, who were contacted, will be rejected without review. Use of a DBE certified by others and not by PennDOT, use of a DBE whose certification has expired or cannot be confirmed by PennDOT's Bureau of Equal Opportunity, or statements that the DBE Goal will be met after a contractor is awarded a contract are unacceptable and will result in rejection of bid.
- G. The prime contractor shall include the Disadvantaged Business Enterprise Requirements in all subcontracts. Subcontractors must conform to the intent of these requirements.
- H. If it becomes necessary to replace a DBE subcontractor during the contract, make a "good faith effort" to re-contract the same or other work with another certified DBE firm. Such an effort must include:
 - 1) Alert PennDOT immediately and document the problem in writing;

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- 2) Contact available DBE referral sources and individual qualified DBEs in an effort to re-contract work to fulfill the DBE Goal stated in the proposal; and
 - 3) Provide PennDOT with a revised form(s) EO-380 and additional "good faith effort" information if the original DBE Goal is not met, by the close of business of the 7th calendar day of PennDOT's receipt of written notice of the need to replace a DBE.
- I. Inform PennDOT, in writing, of any situation in which payments are not made to the DBE Subcontractor as required by the subcontract.
- J. Keep records necessary for compliance with DBE utilization obligations by indicating:
- 1) The number of DBE and non-DBE subcontractors and the type of work, materials or services performed in the project;
 - 2) Efforts to secure DBE firms and individual whenever a subcontractor is contemplated during a contact;
 - 3) Documentation of all communication to obtain the services of DBEs on a project;
 - 4) The amounts paid to DBEs by invoice period.
- K. Upon completion of a DBE's work, the prime contractor must submit a certification of the actual amount paid to the DBE. If the actual amount paid is less than the amount of the subcontract, an explanation is required and subject to the review and action of PennDOT.

5. COUNTING DBE PARTICIPATION

- A. If the contractor submitting the bid and serving as prime contractor is a certified DBE, count the dollar amount of the work to be performed by the DBE toward the DBE Goal.
- B. If the materials or supplies are purchased from a DBE supplier performing as regular dealer, count 60 percent of the cost of the materials or supplies toward DBE Goal. A regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.
- C. If the materials or supplies are obtained from a DBE manufacturer, count 100 percent of the cost of the materials or supplies toward DBE Goal. A manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications.
- D. Count toward the DBE Goal 100% of expenditures of DBE services including professional, technical consultant or managerial services. Count fees or commissions charged for providing any bonds or insurance specifically required for the performance of the contract.
- E. Use the following factors in determining whether a DBE trucking company is performing a commercially useful function:

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- (1) The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.
 - (2) The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
 - (3) The DBE receives credit for the total value of the transportation services it provides on the contract using trucks its owns, insures, and operates using drivers it employs.
 - (4) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
 - (5) The DBE may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement. The DBE does not receive credit for the total value of the transportation services provided by the lessee, since these services are not provided by a DBE.
 - (6) For purposes of this paragraph (E), a lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE
- F. Any services to be performed by a DBE are required to be project related. The use of DBEs is in addition to all other equal opportunity requirements of the contract.

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DBE Special Requirements - Engineering

The engineer shall attain the Disadvantaged Business Enterprise goal that applies to the total cost of the agreement and all supplements thereto, or in the alternative a showing of good faith effort by the engineer shall be made. Documentation of good faith effort shall be made by the engineer and subject to the concurrence of the Department.

The following is a list of types of actions that should be considered as part of the engineer's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The engineer must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The engineer must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime might otherwise prefer to perform these work items with its own forces.

C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

D. (1) Negotiating in good faith with interested DBEs. It is the engineer's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.

(2) A engineer using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a engineer's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime to perform the work of a contract with its own organization does not relieve the engineer of the responsibility to make good faith efforts. Primes are not, however, required

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to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

E. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The firm's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the firm's efforts to meet the project goal.

F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or firm.

G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

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RIGHT-OF-WAY ACQUISITION BY MUNICIPALITY—NON-FEDERAL

- a. The MUNICIPALITY, by gift, agreement, purchase, condemnation or any combination of these methods, shall acquire all necessary right-of-way for this Project.
- b. The MUNICIPALITY shall strictly comply with all federal and state right-of-way acquisition laws and policies that are applicable to the acquisition of right-of-way by the MUNICIPALITY, including, but not limited to, the most current version of DEPARTMENT Publication No. 740, *Local Project Delivery Manual*.
- c. The MUNICIPALITY, subject to the supervision of the DEPARTMENT, shall be responsible for all negotiations, defense of all claims, and initial payment of all property damages resulting from the acquisition, condemnation or both, of right-of-way for this Project. These acquisition costs shall include, but are not limited to:
 - (1) Payment of claims of the affected property owners;
 - (2) Photographic, appraisal and engineering services;
 - (3) Title reports;
 - (4) Reasonable counsel fees and reasonable expert witness fees required for the adjudication of all property damage claims;
 - (5) Transcripts of testimony before a board of view; and
 - (6) All recording costs, including printing costs, in case of appeal to an appellate court.
- d. The DEPARTMENT, with funds made available under Act 235 of 1982, as amended, and (if applicable) Act 26 of 1991, as amended, shall reimburse the MUNICIPALITY for the DEPARTMENT's share of the right-of-way costs incurred by the MUNICIPALITY as provided in PAYMENT PROCEDURES Paragraph of this Agreement.
- e. The DEPARTMENT shall not reimburse the MUNICIPALITY for:
 - (1) Right-of-way administrative costs; or
 - (2) Any items that are not compensable:
 - (i) Under the Eminent Domain Code of 1964, Act of June 22, 1964, P.L. 84, as amended; or
 - (ii) Pursuant to appellate court order or agreement between the DEPARTMENT and the MUNICIPALITY.

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- f. The terms, "right-of-way costs" and "other property damages," as used in this Agreement, shall include, but are not limited to:
- (1) Consequential damages;
 - (2) Damages from de facto or inverse takings;
 - (3) Special damages for displacement;
 - (4) Damages for the preemption, destruction, alteration, blocking and diversion of drainage facilities; and
 - (5) Any other damages that may be claimed or awarded under the applicable federal and state laws and policies referenced in Section a. above.
- g. Prior to advertisement for the receipt of bids, the MUNICIPALITY shall certify to the DEPARTMENT that all right-of-way required for this Project was acquired in accordance with all applicable federal and state laws and policies, including, but not limited to, the most current version of DEPARTMENT Publication No. Publication No. 740, *Local Project Delivery Manual*.

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**PROCEDURES FOR
RIGHT-OF-WAY ACQUISITION BY MUNICIPALITY—FEDERAL-AID HIGHWAY
PROJECTS**

- a. The MUNICIPALITY shall acquire all necessary right-of-way for this Project by gift, agreement, purchase, condemnation, or any combination of these methods.
- b. The MUNICIPALITY shall strictly comply with all applicable right-of-way acquisition procedures set forth in the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, and the DEPARTMENT's Publication No. 740, *Local Project Delivery Manual*.
- c. The MUNICIPALITY, subject to the supervision of the DEPARTMENT, shall be responsible for all negotiations, defense of all claims, and initial payment of all property damages resulting from the acquisition, condemnation or both, of right-of-way for this Project. These acquisition costs shall include, but are not limited to:
 - (1) Payment of claims of the affected property owners;
 - (2) Photographic, appraisal and engineering services;
 - (3) Title reports;
 - (4) Counsel fees;
 - (5) Expert witness fees required for the adjudication of all property damage claims;
 - (6) Transcripts of testimony before a board of view; and
 - (7) All record costs, including printing costs, in case of appeal to an appellate court.
- d. The DEPARTMENT, with funds allocated to it by the FHWA, shall reimburse the MUNICIPALITY for the Federal share of the right-of-way costs incurred by the MUNICIPALITY as provided in the PAYMENT PROCEDURES Paragraph of this Agreement.
- e. The DEPARTMENT shall not reimburse the MUNICIPALITY for:
 - (1) Right-of-way administrative costs; or
 - (2) Any items that are not compensable:
 - (i) Under the Eminent Domain Code of 1964, Act of June 22, 1964, P.L. 84, as amended; or

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- (ii) Pursuant to appellate court order or agreement between the DEPARTMENT and the MUNICIPALITY.
- f. Reimbursement by the DEPARTMENT to the MUNICIPALITY shall be further conditioned upon the following terms for determining an acquisition price for the property to be acquired:
- (1) If any parcel or property is to be acquired prior to a court of common pleas verdict, an agreement for acquisition shall be executed only after the MUNICIPALITY and the DEPARTMENT have agreed in writing on the acquisition price, including all items of damage.
 - (2) If the demands of time require (e.g., at a pretrial conference or at trial), the MUNICIPALITY and the DEPARTMENT may agree orally, provided that such agreement shall be confirmed in writing immediately thereafter.
 - (3) The acquisition price shall not exceed the amount of court verdict, plus applicable detention damages and other items of special damage, unless the DEPARTMENT and the MUNICIPALITY shall have first agreed thereto in writing.
 - (4) The MUNICIPALITY agrees to notify the DEPARTMENT promptly of all board of view awards and verdicts of the court of common pleas. The parties agree that appeals will be taken from any award of judgment whenever either party deems it necessary or advisable.
- g. The terms “right-of-way costs” and “other property damages,” as used in this Agreement, shall include, but are not limited to:
- (1) Consequential damages;
 - (2) Damages from de facto or inverse takings;
 - (3) Special damages for displacement;
 - (4) Damages for the preemption, destruction, alteration, blocking and diversion of drainage facilities; and
 - (5) Any other damages that may be claimed or awarded under the Eminent Domain Code or the State Highway Law, whether awarded or entered against the DEPARTMENT or the MUNICIPALITY.

Prior to advertisement for the receipt of bids, the MUNICIPALITY shall certify to the DEPARTMENT that all right-of-way acquired by the MUNICIPALITY for this Project was acquired in accordance with all applicable federal and state laws and policies, including, but not limited to, DEPARTMENT Publication No. 740, *Local Project Delivery Manual*.

CERTIFICATE OF SERVICE

I hereby certify that I served a copy of the foregoing Public Utility Municipal Contract - Reimbursement Agreement between The City of Pittsburgh and Pittsburgh Water and Sewer Authority for utility adjustment in connection with the Charles Anderson Memorial Bridge Project - upon the persons listed below in the manner indicated in accordance with the requirements of 52 Pa. Code Section 1.54.

Via Email Only (due to the current pandemic emergency)

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Dated: January 3, 2024

/s/ Monica Walaan
Monica Walaan, Esq.
Chief Legal Officer for The Pittsburgh
Water and Sewer Authority