

SECTION 011200
SUMMARY OF THE WORK

PART 1—GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section summarizes construction operations required by the Contract Documents, defines aspects of Prime Contractor's relationship with City and lists special City requirements.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.

1.3 PROJECT DESCRIPTION

- A. The Work covers the removal of existing infrastructure and installation of improvements at Ziehler Playground and Recreation Center, located at 200-64 E. Olney Avenue, Philadelphia, PA, 19120.

Project Scope includes the removal of existing paving, subbase, play equipment, safety surfacing, fencing, and landscaping on the site, and selective demolition and removal of existing partition walls, casework, countertops, roofing, and electrical, mechanical, plumbing, and lighting equipment and fixtures from the building. The Work includes the construction of a new play area, basketball courts, and seating area, including play equipment, safety surface, paving, furnishings, landscaping, and fencing on the site, and new partitions, casework, countertops, furnishings, and electrical, mechanical, and plumbing equipment and fixtures.

The Work also includes Green Stormwater Infrastructure Improvements on site and within the Olney Avenue and B Street Right-of-Ways. The Green Stormwater Infrastructure Improvements on site and in the Right-of-Ways are partially funded by the Philadelphia Water Department and are listed as separate pricing lines on 004114 Construction Bid Proposal.

PWD Green Infrastructure - Rain Garden 1530-1-1 (G1-G12) includes all appurtenant work as defined on Drawings, including but not limited to: Excavation and disposal for GSI work including sheathing and shoring (without classification); Removal and abandonment of existing infrastructure (inlets, piping, etc.); HDPE anti-seep collars; Furnish and place AASHTO #57 stone wrapped in geotextile; Stormwater soils; Overflow structures; Green Highway Grate Inlets (#47, #41); Piping (including cleanouts) within and directed to or from the rain garden (#48, #42, #2); Observation wells; Double ring infiltrometer tests; Energy dissipaters, Concrete Endwall Structures, Concrete Curbing; Pavement restoration within the ROW; E&S Controls within the ROW; Landscaping (L-1, L-2)

PWD Green Infrastructure - Rain Garden 1530-1-2 (G1-G12) includes all appurtenant work as defined on Drawings, including but not limited to: Excavation and disposal for GSI work including sheathing and shoring (without

classification); Removal and abandonment of existing infrastructure (inlets, piping, etc.); HDPE anti-seep collars; Furnish and place AASHTO #57 stone wrapped in geotextile; Stormwater soils; Overflow structures; Green City Inlets (#8, #27); Piping (including cleanouts) within and directed to or from the rain garden (#9, #26, #15); Observation wells; Double ring infiltrometer tests; Energy dissipaters, Concrete Endwall Structures, Concrete Curbing; Pavement restoration within the ROW; E&S Controls within the ROW; Landscaping (L-1, L-2)

Shared Rebuild / PWD Green Infrastructure – Subsurface Trench 1530-1-3 (G1-G12) Includes the total cost of all appurtenant work as defined on Drawings including but not limited to: Excavation and disposal for GSI work including sheathing and shoring (without classification); HDPE anti-seep collars; Furnish and place AASHTO #57 stone wrapped in geotextile; Sand filter layer; Piping (including cleanouts) within and directed to the subsurface trench (#3, #5, #62, #63, #11, #17, #52); Green Inlets (#28, #32, #6, #54); Observation wells; Double ring infiltrometer tests; 15” VCP piping and sewer connection; Pavement restoration within the ROW; E&S Controls within the ROW;

See PWD- ZEIHLE - GREEN MASTER SPEC DIV01 and attached diagram for additional information.

For completed scope of work please refer to the Project Drawings and the Specifications. This project is part of the City’s Rebuilding Community Infrastructure Program ("Rebuild").

1.4 CONTRACTS

- A. Construct Work under a Prime Contract for General Construction Work. The scope of Work for each Contract shall be as indicated below.
 - 1. Incidental Work provided by a one Prime Contractor but specified in a Division mainly the responsibility of a different Prime Contractor shall conform to the applicable specifications (i.e. earthwork required for Plumbing Work shall comply with the requirements of Division 2).
- A. General Construction Work: Provide all the Work of the Contract, no matter where the information is located, except as specifically indicated to be performed by one of the other Prime Contractors.
 - 1. Selective demolition and new construction as required for new Mechanical., Plumbing and Electrical Work but only if indicated on the Demolition or Architectural Drawings. Cutting and patching required by the other Prime Contractors and not specifically indicated on the drawings are the responsibility of the respective Prime.
 - a. Remove conduit runs with wiring, boxes and devices built into existing walls, floors or roof slabs which are to be removed.
 - 2. Install access doors and panels, anchors, embedments, bolts, plates, sleeves, boxes, etc. furnished under other Contracts.
 - 3. Provide blocking, backing, box-outs, openings, recesses, etc. required for the Work of other Contracts.
 - 4. Provide a dumpster for the use of all Contractors.

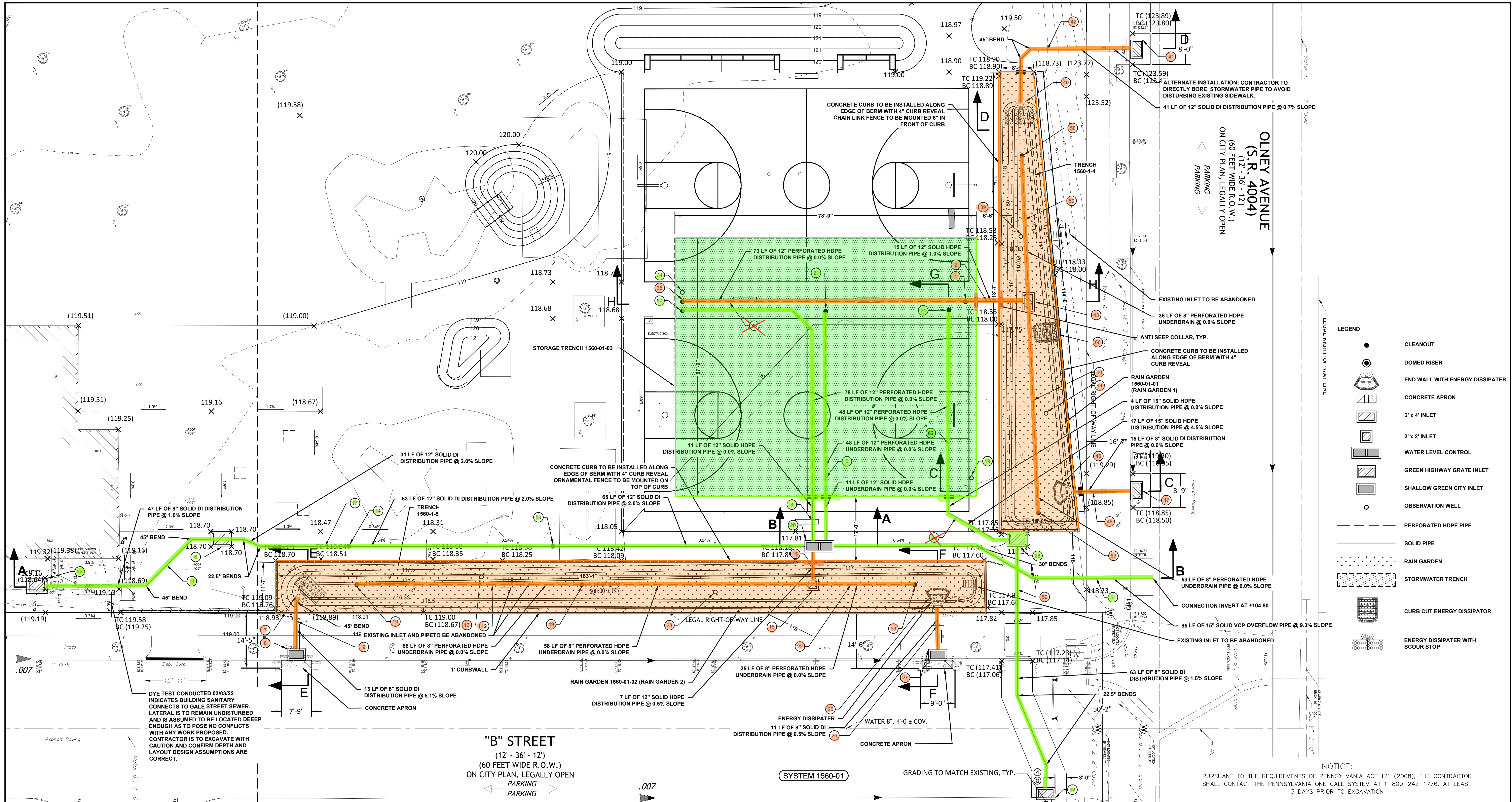
5. Provide periodic and final cleaning of building and site.
6. Normal patching of sprayed-on fireproofing required because of the installation of Work required in other Contracts.
7. Provide control lines and elevation benchmarks at central locations for the extension by other Prime Contractors.
8. Provide temporary site perimeter fence and sidewalk cover if required.
9. Provide temporary toilet facilities for all Contractors.
10. Provide base flashing of roof-mounted curbs and rails provided under other Prime Contracts.
11. Provide painting of all surfaces and equipment exposed to view in the finished Work, regardless of which Prime Contractor provided the surface or equipment.
12. Furnish starters and disconnects for electrical components of systems included in the General Construction Work for installation under the Electrical Contract.

1.5 CONTRACTOR'S USE OF PREMISES

- A. Prime Contractors shall have complete and exclusive use of premises as required for execution of Work of this Contract only.
- B. Coordinate use of premises with Project Coordinator
- C. Protect products stored on-site
- D. Store products to avoid interference with operations of City or other Prime Contractors
- E. Secure and pay for additional storage and work areas if required by Contractor.
- F. Do not overload structure with stored materials.

Attachment: 221130_Ziehler GSI Split Diagram_R1

END OF SECTION



ALTERNATE INSTALLATION: CONTRACTOR TO DIRECTLY BORE STORMWATER PIPE TO AVOID DISTURBING EXISTING SIDEWALK.

OLNEY AVENUE
(S.R. 4004)
(12' - 36' - 12')
(60 FEET WIDE R.O.W.)
ON CITY PLAN, LEGALLY OPEN
PARKING

"B" STREET
(12' - 36' - 12')
(60 FEET WIDE R.O.W.)
ON CITY PLAN, LEGALLY OPEN
PARKING

- LEGEND**
- CLEANOUT
 - DOMED RISER
 - END WALL WITH ENERGY DISSIPATOR
 - CONCRETE APRON
 - 2' x 4' INLET
 - 2' x 2' INLET
 - WATER LEVEL CONTROL
 - GREEN HIGHWAY GRATE INLET
 - SHALLOW GREEN CITY INLET
 - OBSERVATION WELL
 - PERFORATED HDPE PIPE
 - SOLID PIPE
 - RAIN GARDEN
 - STORMWATER TRENCH
 - CURB CUT ENERGY DISSIPATOR
 - ENERGY DISSIPATOR WITH SCOUR STOP

NOTICE:
PURSUANT TO THE REQUIREMENTS OF PENNSYLVANIA ACT 121 (2008), THE CONTRACTOR SHALL CONTACT THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776, AT LEAST 3 DAYS PRIOR TO EXCAVATION.

WARD NUMBER: 42
DRAINAGE SHT. NO.: 70
OUTFALL NO.:
PA ONE CALL: 20191932559

GREEN STORMWATER INFRASTRUCTURE PROJECT

**ZIEHLER PLAYGROUND REBUILD
STORMWATER AND GRADING PLAN
SYSTEM 1560-01
OLNEY STREET AND B STREET**

APPROVED: MELIORA DESIGN

PHILADELPHIA WATER DEPARTMENT
PHILADELPHIA PARKS & RECREATION
Rebuild PHILADELPHIA
SALT DESIGN STUDIO
LANDSCAPE ARCHITECTURE PLANNING & URBAN DESIGN
meliora
Civil, Water Resources, and Structural Engineering
209 Morgan St., Pottsville, PA 17854
P: 610.933.0123 | www.melioradesign.com

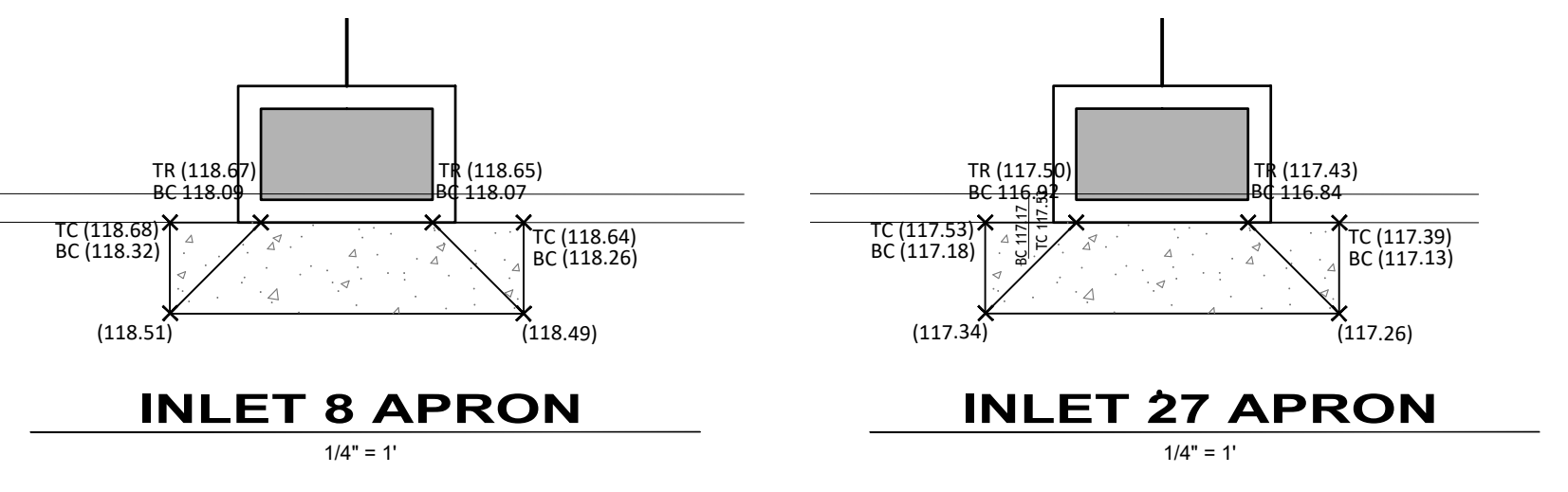
CITY OF PHILADELPHIA WATER DEPARTMENT
SCALE: PLAN 1"=10'
PROFILE VERT. 1"=10'
HORIZ. 1"=50'
SECTION 1/4"=4'

WORK NO. S-50329-G
SHEET NO. G-1 OF 12 SHEETS

DRAWN BY: M.JR. MAD 08/15/22
PROJECT ENGR: AMM 08/15/22
SUPERVISOR: DATE:

#	COMPONENT ID	COMPONENT TYPE	PIPE LENGTH (FT)
1	G1560003-50-35	CLEANOUT	N/A
2	G1560003-20-26	SOLID/PERFORATED DISTRIBUTION PIPE	43
3	G1560003-20-15	SOLID/PERFORATED DISTRIBUTION PIPE	39
4	G1560003-21-09	SOLID/PERFORATED UNDERDRAIN	39
5	G1560003-14-10	GREEN HIGHWAY INLET	N/A
6	G1560003-45-05	ENDWALL WITH SCOUR STOP	N/A
7	G1560002-17-05	SHALLOW CITY INLET WITH CONCRETE APRON	N/A
8	G1560002-20-05	SOLID DISTRIBUTION PIPE	13
9	G1560005-50-05	CLEANOUT	N/A
10	G1560005-50-05	CLEANOUT	N/A
11	G1560005-20-05	SOLID DISTRIBUTION PIPE	63
12	G1560005-21-05	PERFORATED UNDERDRAIN	116
13	G1560005-51-05	OBSERVATION WELL	N/A
14	G1560003-50-05	CLEANOUT	N/A
15	G1560005-25-05	OVERFLOW PIPE	7
16	G1560002-63-05	2'X2' OVERFLOW STRUCTURE	N/A
17	G1560003-20-10	SOLID DISTRIBUTION PIPE	189
18	G1560003-51-05	OBSERVATION WELL	N/A
19	G1560003-51-05	OBSERVATION WELL	N/A
20	G1560003-63-05	WATER LEVEL CONTROL STRUCTURE	N/A
21	G1560003-50-25	CLEANOUT	N/A
22	G1560005-21-10	PERFORATED UNDERDRAIN	25
23	G1560005-51-10	OBSERVATION WELL	N/A
24	G1560003-45-10	ENDWALL WITH ENERGY DISSIPATOR	N/A
25	G1560002-20-10	SOLID DISTRIBUTION PIPE	13
26	G1560002-17-10	SHALLOW CITY INLET WITH CONCRETE APRON	N/A
27	G1560003-14-20	GREEN HIGHWAY INLET	N/A
28	G1560003-50-30	CLEANOUT	N/A
29	G1560003-14-05	GREEN HIGHWAY INLET	N/A
30	G1560003-51-10	OBSERVATION WELL	N/A

31	G1560003-50-20	CLEANOUT	N/A
32	G1560004-51-05	OBSERVATION WELL	N/A
33	G1560001-45-10	ENDWALL WITH SCOUR STOP	N/A
34	G1560001-14-10	GREEN HIGHWAY INLET	N/A
35	G1560001-20-10	SOLID DISTRIBUTION PIPE	41
36	G1560001-63-05	2' X 4' OVERFLOW STRUCTURE	N/A
37	G1560004-51-10	OBSERVATION WELL	N/A
38	G1560001-45-05	ENDWALL WITH ENERGY DISSIPATOR	N/A
39	G1560001-14-05	GREEN HIGHWAY INLET	N/A
40	G1560001-20-05	SOLID DISTRIBUTION PIPE	35
41	G1560005-50-10	CLEANOUT	N/A
42	G1560003-50-10	CLEANOUT	N/A
43	G1560005-25-10	SOLID OVERFLOW PIPE	35
44	G1560003-20-30	SOLID DISTRIBUTION PIPE	63
45	G1560005-50-15	CLEANOUT	N/A
46	G1560003-14-10	GREEN HIGHWAY INLET	N/A
47	G1560001-14-05	GREEN HIGHWAY INLET	N/A
48	G1560001-20-05	SOLID DISTRIBUTION PIPE	35
49	G1560005-50-10	CLEANOUT	N/A
50	G1560004-21-10	PERFORATED UNDERDRAIN	36
51	G1560004-21-05	PERFORATED UNDERDRAIN	33
52	G1560003-20-25	PERFORATED DISTRIBUTION PIPE	28
53	G1560004-50-05	CLEANOUT	N/A



PWD ONLY (Orange line)
SHARED (Green line)

PWD TRACKING NUMBER: FY21-ZIEH-6284-01
ISSUE FOR BIDDING
08-15-2022

SECTION 012100

ALLOWANCES

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section specifies each Prime Contractor's administrative and procedural requirements governing handling and processing allowances

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.
- B. Each section of the specifications including an allowance.

1.3 COORDINATION

- A. Designate required selection and delivery dates for products under each allowance in the Contractor's Construction Schedule.
- B. Designate each allowance with extensions based on estimated quantities for unit price allowances on Contractor's Schedule of Values.

1.4 DEFINITIONS

- A. Refer to Section 007200.

1.5 ALLOWANCES

- A. **Include in Total Base Bid Amount, an amount equal to Two Percent (2%) of the base bid amount for payment of permit fees. This is a direct cost; no mark-ups will be permitted.**
- B. Amount of each allowance (excluding 1.5.A above) shall include:
 - 1. Net cost of product.
 - 2. Delivery to site.
 - 3. Applicable taxes.
 - 4. Preparing submittals.
- C. In addition to amounts of allowances (excluding 1.5.A above), include in the base bid amount, the Contractor's cost for:
 - 1. Assisting in selection and obtaining proposals from suppliers and subcontractors.
 - 2. Processing submittals.
 - 3. Handling at site, including unloading, uncrating and storage.
 - 4. Protection from elements and from damage.
 - 5. Labor, installation and finishing.
 - 6. Other expenses required to complete installation.
 - 7. Overhead and profit.

1.6 SELECTION OF PRODUCTS

- A. Design Professional shall issue by Change Order a full specification for the final selected product.
- B. Contractor's Duties
 - 1. Notify Design Professional of deadlines for specification of final products, allowing for Contractor's required submissions as required to meet Date of Completion.
 - 2. Provide cost proposals for products being considered when requested by Design Professional.
 - 3. Notify Design Professional of any effect anticipated by selection of product or supplier under consideration as it relates to:
 - a. Construction Schedule.
 - b. Contract Sum.
 - c. On notification of selection, enter into purchase agreement with designated supplier.

1.7 INSTALLATION

- A. Comply with requirements of applicable specification section, including warranties/guarantees.

1.8 ADJUSTMENT OF COSTS

- A. Should actual purchase cost be more or less than specified amount of allowance, Contract Sum shall be adjusted by Change Order equal to amount of difference. A percentage to cover Contractor's overhead and profit, as stated in Standard Contract Requirements, will be applied to difference in cost.
- B. For products specified under unit cost allowance unit cost applies to quantity required to complete the Work as determined by the Contractor.
 - 1. Submit invoices or other data to substantiate quantity actually used.
- C. Submit request for other costs, claimed for additional work caused by increase over amount of allowance, prior to required submission for product.

PART 2 PRODUCTS Not Used

PART 3 EXECUTION Not Used

- END -

SECTION 012300
ALTERNATES

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section identifies each Alternate by number and describes the basic changes to be incorporated into the Work, if that Alternate is made part of the Contract.

1.2 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.

1.3 ADMINISTRATIVE PROCEDURES

- A. Referenced Sections of Specifications stipulate pertinent requirements for products and methods to achieve the Work stipulated under each Alternate.
- B. Coordinate pertinent related Work and modify surrounding Work as required to properly integrate the Work under each Alternate, and to provide the complete construction required by the Contract Documents.
- C. Immediately following the award of the Contract, prepare and distribute to each party involved, notification of the status of each Alternate. Indicate whether Alternates have been accepted, rejected or deferred for consideration at a later date.
- D. A "Schedule of Alternates" is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials and methods necessary to achieve the Work described under each Alternate. Include as part of each Alternate, miscellaneous devices, accessory objects and similar items incidental to or required for a complete installation whether or not mentioned as part of the Alternate.

1.4 DEFINITIONS

- A. Refer to Section 007200 Standard Contract Requirements.

PART 2 - PRODUCTS Not Used

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. **DEDUCT ALTERNATE No. 1:** Install Chain Link Fencing in lieu of Ornamental Fencing

Omit details for ornamental fence 1, 2 and 3 on drawing L-503. Chain link fence to match extend and height shown for ornamental fence (4'-0"). See specifications SECTION 323113 - CHAIN LINK FENCES AND GATES for more information and product description. See detail 4 on drawing L-503 for chain link fence detail.

Commented [AV1]: @Michelle, should this be the other way around, we want to take away the Ornamental fencing and replace it with chain link as cost saving

Commented [MS2R1]: yes but I changed it to make it clearer.

B. **DEDUCT ALTERNATE No. 2:** Omit Concrete Curb Around Playground

- A. Omit concrete curb around playground perimeter shown on drawing L-102, Site Plan Layout. See attached PPR Standard Details **220915_PPR-SS-Dtl_REV – Safety Surface to Landscape Detail** and **220915_PPR-SS-Dtl2_REV – Safety Surface to Concrete Curb Detail** for deduct alternate. **Note: Safety Surface to Concrete Curb Detail depicts a joint between safety surface to concrete pavement or asphalt.**

Commented [MS3]: attach to this document or otherwise ensure they are in order with files

Commented [MS4]: this doesn't look like the right detail if we're removing the concrete curb

C. **DEDUCT ALTERNATE No. 3:** Omit all Field Lighting - Includes Electrical Conduit, Trenching, Backfield, Poles, and Foundation

Omit new field lights shown on drawing EL-101, Field and Site Lighting Plan. Omit new field lighting electrical conduit on shown on E-0.1 Site - Electrical, E-0.2 Site Plan Details and Power Riser Diagrams, C-301, C-302 Utility Sheet Plan. Omit concrete footing for fields lights detail 4/L-505 FIELD LIGHT FOUNDATION, EL-701- Field Lighting – Cooper Aiming Diagram and Calculation Summary, EL-702 – Field Lighting – Cooper Aiming Diagram and Calculation Summary, EL-703 – Field Lighting – Cooper Aiming Diagram and Calculation Summary, EL-704 – Field Lighting – Cooper Aiming Diagram and Calculation Summary, EL-705 – Field Lighting – Cooper Aiming and Calculation Summary, EL-706 – Field Lighting – Cooper Aiming Diagram and Calculation Summary, EL-707 – Field Lighting – Cooper Aiming Diagram and Calculation Summary, EL-708 – Field Lighting – Cooper Aiming Diagram and Calculation Summary show scope of field lights.

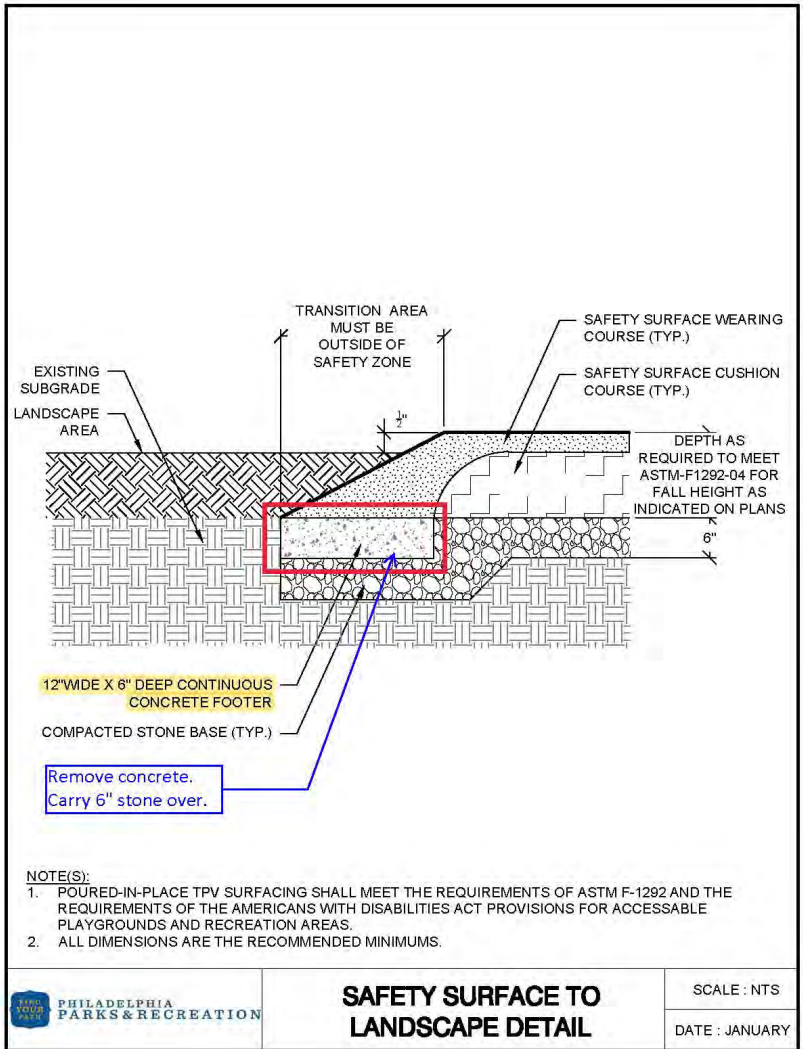
Commented [MS5]: these need to match drawing titles exactly - this is "E 0.1 Site Plan – Electrical" on the List of Drawings. capitalization, etc needs to match so readers can tell drawing names from the instructions. Correct for all.

Attachments:

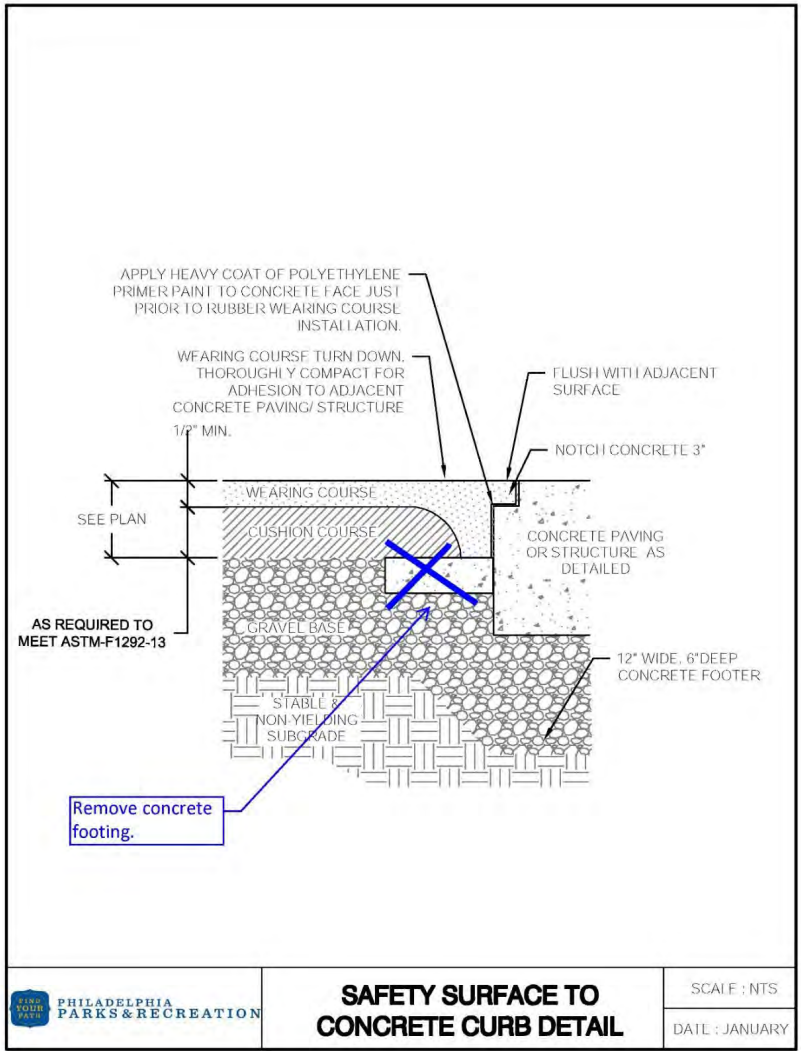
220915_PPR-SS-Dtl_REV – Safety Surface to Landscape Detail

220915_PPR-SS-Dtl2_REV – Safety Surface to Concrete Curb Detail

Commented [MS6]: this doesn't look like the right detail if we're removing the concrete curb



Commented [MS7]: this doesn't look like the right detail if we're removing the concrete curb



- END -

ZIEHLER PLAYGROUND AND BUILDING RENOVATION
012300 - 5
ALTERNATES

SECTION 012300
ALTERNATES

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section identifies each Alternate by number and describes the basic changes to be incorporated into the Work, if that Alternate is made part of the Contract.

1.2 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.

1.3 ADMINISTRATIVE PROCEDURES

- A. Referenced Sections of Specifications stipulate pertinent requirements for products and methods to achieve the Work stipulated under each Alternate.
- B. Coordinate pertinent related Work and modify surrounding Work as required to properly integrate the Work under each Alternate, and to provide the complete construction required by the Contract Documents.
- C. Immediately following the award of the Contract, prepare and distribute to each party involved, notification of the status of each Alternate. Indicate whether Alternates have been accepted, rejected or deferred for consideration at a later date.
- D. A "Schedule of Alternates" is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials and methods necessary to achieve the Work described under each Alternate. Include as part of each Alternate, miscellaneous devices, accessory objects and similar items incidental to or required for a complete installation whether or not mentioned as part of the Alternate.

1.4 DEFINITIONS

- A. Refer to Section 007200 Standard Contract Requirements.

PART 2 - PRODUCTS Not Used

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. **DEDUCT ALTERNATE No. 1:** Install Chain Link Fencing in lieu of Ornamental Fencing

Omit details for ornamental fence 1, 2 and 3 on drawing L-503. Chain link fence to match extend and height shown for ornamental fence (4'-0"). See specifications SECTION 323113 - CHAIN LINK FENCES AND GATES for more information and product description. See detail 4 on drawing L-503 for chain link fence detail.

B. **DEDUCT ALTERNATE No. 2:** Omit Concrete Curb Around Playground

- A. Omit concrete curb around playground perimeter shown on drawing L-102, Site Plan Layout. See attached PPR Standard Details **220915_PPR-SS-Dtl_REV – Safety Surface to Landscape Detail** and **220915_PPR-SS-Dtl2_REV – Safety Surface to Concrete Curb Detail** for deduct alternate. **Note: Safety Surface to Concrete Curb Detail depicts a joint between safety surface to concrete pavement or asphalt.**

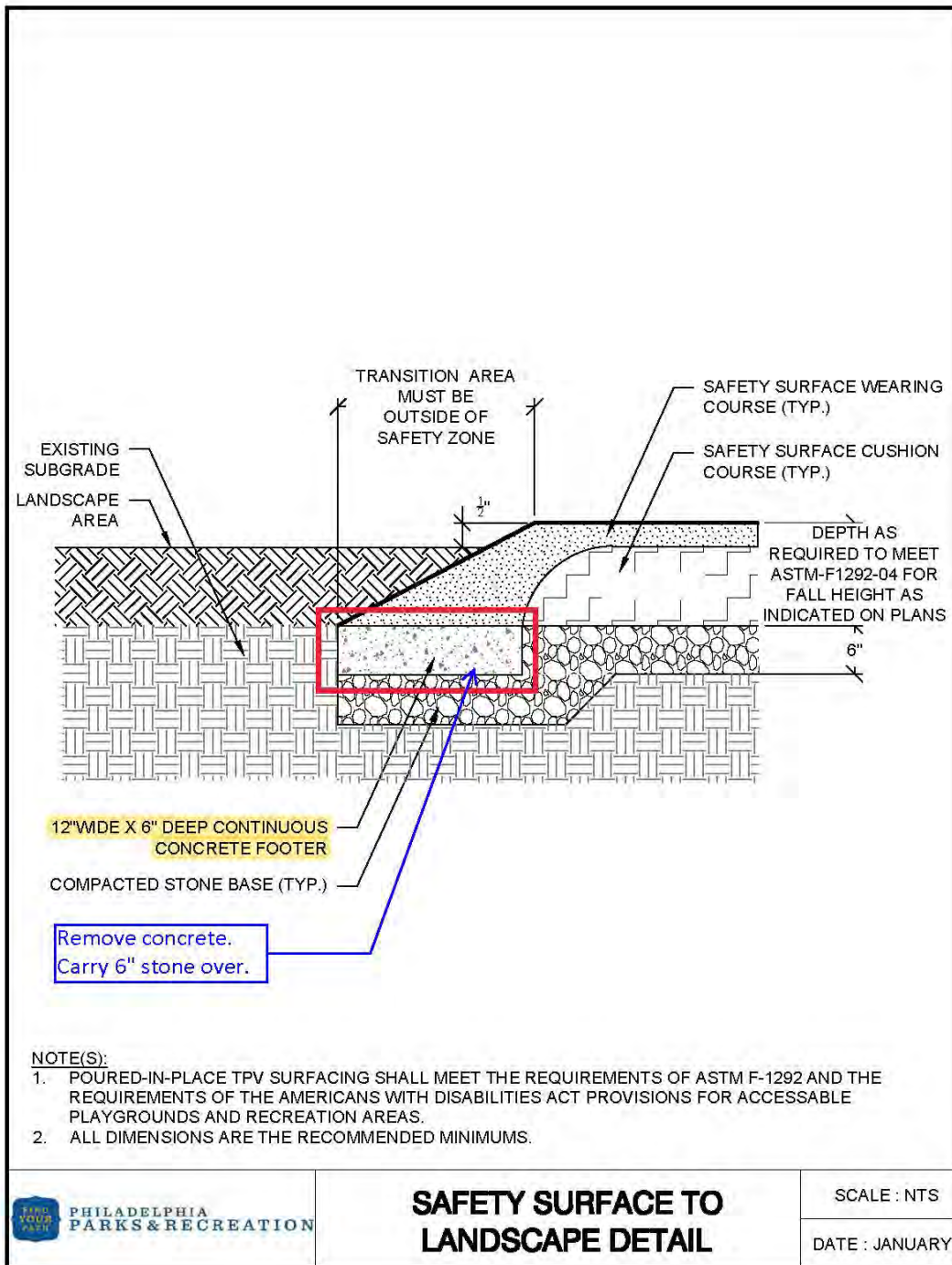
C. **DEDUCT ALTERNATE No. 3:** Omit all Field Lighting - Includes Electrical Conduit, Trenching, Backfield, Poles, and Foundation

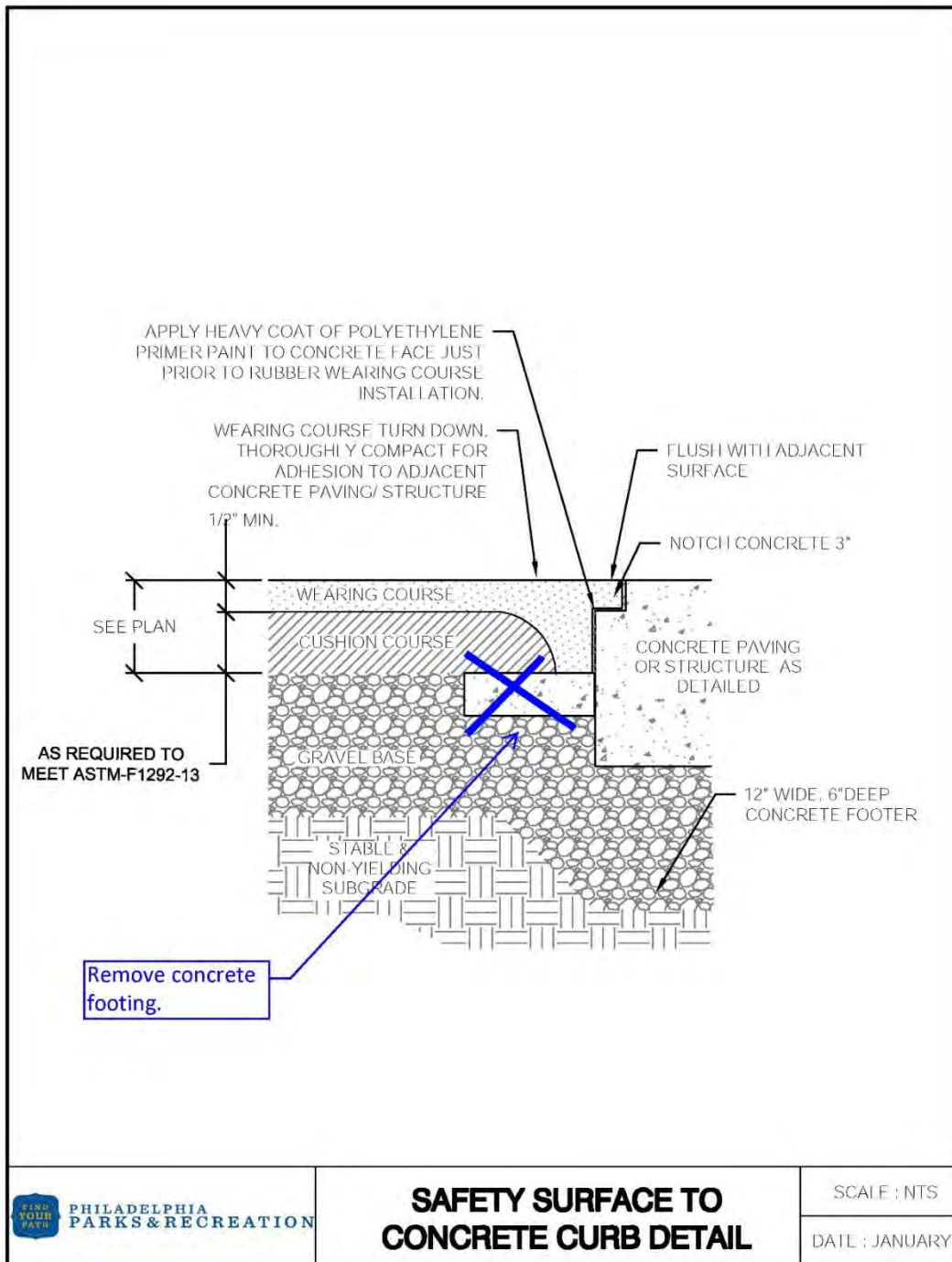
Omit new field lights shown on drawing EL-101, Field and Site Lighting Plan.
Omit new field lighting electrical conduit on shown on E-0.1 Site - Electrical, E-0.2 Site Plan Details and Power Riser Diagrams, C-301, C-302 Utility Sheet Plan.
Omit concrete footing for fields lights detail 4/L-505 FIELD LIGHT FOUNDATION, EL-701- Field Lighting – Cooper Aiming Diagram and Calculation Summary, EL-702 – Field Lighting – Cooper Aiming Diagram and Calculation Summary, EL-703 – Field Lighting – Cooper Aiming Diagram and Calculation Summary, EL-704 – Field Lighting – Cooper Aiming Diagram and Calculation Summary, EL-705 – Field Lighting – Cooper Aiming and Calculation Summary, EL-706 – Field Lighting – Cooper Aiming Diagram and Calculation Summary, EL-707 – Field Lighting – Cooper Aiming Diagram and Calculation Summary, EL-708 – Field Lighting – Cooper Aiming Diagram and Calculation Summary show scope of field lights.

Attachments:

220915_PPR-SS-Dtl_REV – Safety Surface to Landscape Detail

220915_PPR-SS-Dtl2_REV – Safety Surface to Concrete Curb Detail





– END –

SECTION 012500
SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section specifies each Prime Contractor's administrative and procedural requirements for handling requests for substitutions made after award of the Contract. Procedural requirements governing the Contractor's selection of products and product options are included under Section 016001 "Products and Materials".

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.

1.3 DEFINITIONS

- A. Definitions used in this Article are not intended to change or modify the meaning of other terms used in the Contract Documents.
- B. Substitutions - Requests for changes in products, materials, equipment, and construction required by Contract Documents proposed by the Contractor after award of the Contract are considered requests for "substitutions". The following shall not be considered substitutions:
 - 1. Substitutions requested by Bidders during the bidding period, and accepted in Addenda prior to award of Contract.
 - 2. Revisions to Contract Documents requested by the City or Design Professional.
 - 3. Specified options of products and construction methods included in Contract Documents.
 - 4. The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.
- C. "Or equal", "or equivalent", "approved equal", "approved equivalent", "equivalent substitution" and all other similar terms shall be interpreted as "substitution" as defined above.

1.4 SUBMITTALS

- A. Submit three (3) copies of each request for substitution. Submit requests with the form attached at the end of this Section and in accordance with procedures required for Change Order proposals. Attach all other data and certification.
- B. Identify the product, or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate.
- C. Product Data, including Drawings and descriptions of products, fabrication and installation procedures.

- D. Samples, where applicable or requested.
- E. A detailed comparison of salient features and qualities of the proposed substitution with those of the Work specified. Salient features and qualities may include elements such as size, weight, durability, performance and visual effect as determined by the Design Professional. Submit documentation of salient features and qualities from independent testing agencies performing industry recognized tests. The manufacturer's claims of performance may or may not be used in evaluation of substitutions at the discretion of the Design Professional.
- F. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the City and separate Contractors, that will become necessary to accommodate the proposed substitution.
- G. A statement indicating the substitution's effect on the Contractor's Construction Schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.
- H. Cost information, including a proposal of the net change, if any in the Contract Sum. The Contractor shall certify that the cost data presented is complete and includes all related costs under this Contract, but excludes the Design Professional's redesign costs.
- I. Certification by the Contractor that the substitution proposed is equal-to or better in every significant respect to that required by the Contract Documents, and that it will perform adequately in the application indicated. Include the Contractor's waiver of rights to additional payment or time, that may subsequently become necessary because of the failure of the substitution to perform adequately.
- J. Certification that the Contractor will reimburse the City for all costs for additional services by the Design Professional and/or the Department of Parks & Recreation relating to any substitution that necessitates a design change and related documentation.
- K. Design Professional's Action - The Design Professional will notify the Contractor of acceptance or rejection of the proposed substitution. The Design Professional will be the sole judge of the acceptability of the proposed substitution. Acceptance will be in the form of a Change Order. The Change Order will include a deduction from the Contract Sum for additional costs incurred by the City because of the substitution including, but not limited to, Design Professional's fees.

PART 2 PRODUCTS

2.1 SUBSTITUTIONS

- A. Conditions - The Contractor's substitution request will be received and considered by the Design Professional when one or more of the following conditions are satisfied, as determined by the Design Professional; otherwise requests will be returned without action except to record noncompliance with these requirements.
 - 1. Extensive revisions to Contract Documents are not required.
 - 2. Proposed changes are in keeping with the general intent of Contract Documents.

3. The request is timely, fully documented and properly submitted.
 4. The request is directly related to an “or approved substitution” clause or similar language in the Contract Documents.
 5. The specified product or method of construction cannot be provided within the Contract Time. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.
 6. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
 7. A substantial advantage is offered the City, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities the City may be required to bear. Additional responsibilities for the City may include additional compensation to the Design Professional for redesign and evaluation services, increased cost of other construction by the City or separate Contractors, and similar considerations.
- B. The specified product or construction cannot be provided in a manner that is compatible with other materials, and where the Contractor certifies that the substitution will overcome the incompatibility.
 - C. The specified product or construction cannot be coordinated with other materials, and where the Contractor certifies that the proposed substitution can be coordinated.
 - D. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution provide the required warranty.
 - E. Where a proposed substitution involves more than one Prime Contractor, each Contractor shall cooperate with the other Contractors involved to coordinate the Work, provide uniformity and consistency, and to assure compatibility of products.
 - F. The Contractor’s submittal and Design Professional acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.

PART 3 EXECUTION Not Applicable

Attachment - Substitution Request Form (4 pages)

- END -

CITY OF PHILADELPHIA SUBSTITUTION REQUEST FORM

INSTRUCTIONS:

- A. This request must be submitted and signed by the Prime Contractor.
- B. A request for each substitution must be exactly in this form, including all items. (One (1) item of substitution per form).
- C. Attach complete information on changes to Drawings and Specifications that proposed substitution will require for its proper installation.
- D. Submit with request, all necessary samples and substantiating data to prove quality and performance is equal to that which is specified. Clearly mark manufacturer's literature to indicate equality in performance

CONTRACT AWARD DATE: _____ DATE OF REQUEST: _____

CONTRACTOR: _____

PROJECT: _____

We hereby submit for your consideration the following substitution in lieu of the specified item for the above project:

SPEC. SECTION NO.: _____ PARAGRAPH: _____ SPECIFIED ITEM: _____

PROPOSED
SUBSTITUTION: _____

REASON
FOR
REQUEST: _____

ITEMIZED COMPARISON OF SPECIFIED ITEM WITH THE PROPOSED SUBSTITUTION:
PERFORMANCE: _____

APPEARANCE: _____

REFERENCED
STANDARDS:_____

DEDUCT CHANGE ORDER OFFERED FOR PROPOSED SUBSTITUTION:_____

MANUFACTURER'S WARRANTIES OF THE PROPOSED AND SPECIFIED ITEMS:

LENGTH OF WARRANTY: AS SPECIFIED []. PROPOSED []

MATERIALS COVERED:AS SPECIFIED []. PROPOSED []

LABOR COVERED:AS SPECIFIED []. PROPOSED []

OTHER TERMS: AS SPECIFIED:_____

PROPOSED SUBSTITUTION:_____

DESIGNATION OF MAINTENANCE SERVICES AND SOURCES:_____

DOES SUBSTITUTION AFFECT DIMENSIONS OR CLEARANCES SHOWN ON THE
DRAWINGS? YES [] NO [].

IF YES, CLEARLY INDICATE
CHANGES:_____

WILL THE UNDERSIGNED PAY FOR CHANGES TO THE BUILDING DESIGN,
INCLUDING ENGINEERING AND DETAILING COSTS CAUSED BY THE REQUESTED
SUBSTITUTION? YES [] NO [].

IF NO, FULLY EXPLAIN:_____

WHAT EFFECT DOES SUBSTITUTION HAVE ON OTHER CONTRACTS OR TRADES?__

WHAT EFFECT DOES SUBSTITUTION HAVE ON CONSTRUCTION SCHEDULE?_____

CONTRACTORS CERTIFICATION OF EQUAL PERFORMANCE

The undersigned certifies that:

He/she has investigated the proposed substitution and has determined that it is equal to or better than the product specified.

He/she will guarantee the substitution in the same manner as the product specified.

He/she will coordinate and make other changes as required in the Work as a result of the substitution.

He/she waives all claims for additional costs as a result of the substitution, with the exception of those identified above under "cost data".

He/she will reimburse the City for all costs for design change resulting from the substitution.

Submitted by:

Signature _____

Name: _____ Title: _____

Firm: _____ Date: _____

Street: _____

City _____ State _____ Zip Code _____

Telephone: _____

Signature shall be by person having authority to legally bind his firm to the above terms. Failure to provide legally binding signature will result in rejection without further review by Design Professional.

Design Professional's Action

Accepted []

Accepted as noted []

Not accepted []

Received too late []

Signature: _____

-END-]

SECTION 012600
CONTRACT MODIFICATION PROCEDURES

PART 1 GENERAL

1.1 CHANGE ORDER PROCEDURE

- A. If a change in the design of any portion of the work or the requirements of the Project Manual is deemed necessary by the City/PRA, they may order an alteration to, or a change in, the work covered by the Contract Documents, and the contractor shall comply with such orders. If such changes increase the cost of the work to the Contractor, the City/PRA will allow additional compensation. If such changes diminish the cost of the work to the Contractor the City/PRA may deduct the amount of the diminution. No consequential loss or profit due to reduction in the scope of work will be allowed the Contractor, but the Contractor may be entitled to an extension of time in these instances. No changes shall be made except upon a standard Change Order Form, signed and executed by the Contractor and the City/PRA authorizing the change and fixing the method of compensation or deduction. This Section specifies administrative and procedural requirements for handling and processing Change Orders.
- B. The execution of a change order (increase or decrease) will require a proposal from the Contractor on company letterhead. Such proposal will include a complete description of the change and schedule impact and a complete cost breakdown including such items as Labor, Materials, Equipment, Crew Composition, Sub-Contractor costs, and associated Insurance and Bonding costs (if applicable). The contractor is entitled to percentage mark-ups on some of these items as stated in the Standard Contract Requirements. The proposal is to be submitted to the City/PRA. Upon review and approval by the City/PRA Project Team, a signed standard Change Order Form will be forwarded to the Contractor for final execution.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements and other Division 1 sections of the Standard Contract Requirements (007200).

1.3 CONTRACTOR'S RESPONSIBILITY TO INFORM

- A. Communication, either verbal or written, between the City/PRA or Design Professional and the Contractor, Subcontractors, or other parties involved, during the normal course of administration of the Contract, does not in any way constitute acceptance of a Change Order or direction to modify the Contract unless said communication is in the form of a written Change Order or Construction Change Directive as specified herein.
- B. Communication from the City/PRA or Design Professional including, but not limited to the following, does not constitute approval of a Change Order:
 - 1. Submittal review including submittals returned with notations and corrections;
 - 2. Site observation, conversation and reports;
 - 3. Participation in pre-construction, pre-installation, progress or other meetings;
 - 4. Clarification sketches or drawings.
- C. It is the responsibility of the Contractor to inform the City/PRA that any communication has, in the Contractor's opinion, caused reason to modify the Contract. The Contractor shall not undertake work which, in his opinion, requires a Change Order without completing procedures outlined herein.

- D. Work done without completing Change Order procedures is entirely at the Contractor's own risk, even if the Contractor believes that communications from the City/PRA or Design Professional contain instructions to do work outside of the Contract scope.
 - E. The City/PRA and Design Professional will not willfully instruct work to be done that differs from the contract except through the Change Order procedures contained herein.
- 1.4 MINOR CHANGES IN THE WORK
- A. Supplemental instructions, not involving an adjustment to the Contract Sum or Contract Time, may be issued in writing by the PRA.
- 1.5 CHANGE ORDER PROPOSALS
- A. City/PRA-Initiated Change Order Proposal - Proposed changes in the Work that will require adjustment to the Contract Sum or Contract Time will be issued by the City/PRA, with a detailed description of the proposed change and supplemental or revised Drawings and Specifications, if necessary.
 - 1. Change Order Proposal requests issued by the City/PRA are for information only. Do not consider them as instruction either to stop work in progress, accelerate the work or to execute the proposed change.
 - 2. Unless otherwise indicated in the Change Order Proposal request, within 20 days of receipt of the Change Order Proposal request, submit to the City/PRA for review, an estimate of cost necessary to execute the proposed change.
 - a. Include a list of quantities of products to be purchased and unit costs, along with the total amount of purchases to be made. Separate labor and material charges. Where requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include a statement indicating the effect the proposed change in the Work will have on the Contract Time or any special efforts of the Contractor that will be employed to reduce the delay.
 - d. Indicate that the Change Order Proposal is in response to a City/PRA request and submit it to the City/PRA as stated in 1.1 (B) of this section.
 - B. Contractor-Initiated Change Order Proposal – When Contractor claims latent or other unforeseen conditions require modifications to the Contract, the Contractor may propose changes by submitting a Change Order Proposal.
 - 1. Include a statement outlining the reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and Contract Time.
 - 2. Include a list of quantities of products to be purchased and unit costs along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
 - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 4. Comply with requirements in Section 012500 “Substitution Procedures” if the proposed change in the Work requires the substitution of one product or system for a product or system specified.

5. Submit the proposal to the City/PRA as stated in 1.1 (B) of this section.

1.6 ALLOWABLE MARKUPS

A. For change orders, overhead and profit shall be the aggregate total amount allowed to the Contractor and shall include the costs of the Project Manager, office personnel, small tools, among other things. The markup for overhead and profit shall be calculated as follows:

- i. Cost between \$0.00 and \$25,000.00 - **12%**
- ii. Cost between \$25,001.00 and \$50,000.00 - **10%**
- iii. Cost over \$50,000.00 - **8%**
- iv. Contractor markup for Subcontractor, and lower tier contractors shall not exceed **8%**

B. Under no circumstances shall the total combined markup for overhead and profit by the Contractor exceed the percentages for markup for overhead and profit indicated in Subparagraphs (1), (2), (3) and (4) above. The Rebuild Office shall make the final determination as to net cost of labor and materials. All Change Orders relating to price and/or time are subject to prior acceptance or approval by the Rebuild Office, or express ratification of Change Order work already for the Rebuild Office.

1.7 ALLOWANCES

A. Refer to Section 012100, Allowances.

1.8 CONSTRUCTION CHANGE DIRECTIVE (Force Account)

- A. When the City/PRA and Contractor are not in total agreement on the terms of a Change Order Proposal, the City/PRA may issue a Construction Change Directive instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
- B. The Construction Change Directive will contain a complete description of the change in the Work.
- C. Documentation - Maintain detailed records on a time and material basis of work required by the Construction Change Directive. After completion of the change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.
 - 1. Contractor's documentation will not, by itself, establish the final cost.
 - 2. The City/PRA reserves the right to determine the value of the change in Work per the requirements of this Section.

1.9 DETERMINATION OF COST

A. City/PRA reserves the right to use established estimating methods (including but not limited to industry standards and unit prices listed in this manual) to determine a fair and reasonable cost for changes in the Work.

PART 2 PRODUCTS Not used.

PART 3 EXECUTION

3.1 Sample Change Order Form, contact Project Coordinator for actual document.

-END-

SECTION 012900
PAYMENT PROCEDURES

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section specifies administrative and procedural requirements governing each Prime Contractor's submission of invoices for Payment. These may also be referred to as "Current Estimates" in the Standard Contract Requirements (007200).
- B. Coordinate the Contractor's Construction Schedule, List of Subcontracts, and Submittal Schedule with the Standard Cost Breakdown.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements and other Division 1 of the Standard Contract Requirements (007200).
- B. See PWD- ZEIHLE - GREEN MASTER SPEC DIV01 for additional information.

1.3 GENERAL REQUIREMENTS

- A. Each invoice for payment shall be consistent with previous applications and payments.
- B. The initial submission of the Standard Cost Breakdown at time of Substantial Completion, and the final Standard Cost Breakdown involve additional requirements.
- C. Withholding Payment - Any payment may be withheld in accordance with the Contract Documents
 - 1. Any payment may be withheld if the procedural requirements including submittal of current administrative items listed including Certificates of Insurance are incomplete or outdated.
 - 2. Portions of payment requested for Work installed without approved submittals may be withheld.
- D. Standard Cost Breakdown Preparation - Complete every entry on the Standard Cost Breakdown:
 - 1. Contractor (name and address)
 - 2. Contract number (from Notice to Proceed);
 - 3. Requisition No. (sequential number);
 - 4. Date Prepared;
 - 5. Project (title of project);
 - 6. STANDARD COST BREAKDOWN
 - a. No. (sequentially numbering);
 - b. Item (phases of scope of work);

- c. Unit (each, sq. ft., etc.);
- d. Material;
- e. Labor;
- f. Unit Cost;
- g. Total (total of Material and Labor).

7. PAYMENT APPLICATION

- a. Previous Billing (as billed previous application);
- b. Percent Complete (completed to date);
- c. Total Completed (Total column under COST BREAKDOWN multiplied by Percent Complete column under PAYMENT APPLICATION.)

Incomplete Standard Cost Breakdowns will be returned without action.

- E. Entries shall match data on the Contractor's Construction Schedule. Use updated schedules if revisions have been made.
- F. Include amounts of Change Orders issued prior to the last day of the construction period covered by the Standard Cost Breakdown.
- G. Submit original plus 2 copies of each Standard Cost Breakdown to the Robert LaBrum, Director, Design & Construction, PRA, 1234 Market Street, 16th Floor, Philadelphia, PA 19107

1.4 INITIAL STANDARD COST BREAKDOWN

- A. Actions and submittals that shall precede or coincide with submittal of the first Standard Cost Breakdown include the following:
 - 1. List of subcontractors.
 - 2. List of principal suppliers and fabricators.
 - 3. Schedule of Values.
 - 4. Contractor's Construction Schedule (preliminary if not final).
 - 5. Schedule of unit prices.
 - 6. Submittal Schedule (preliminary if not final).
 - 7. List of Contractor's staff assignments.
 - 8. List of Contractor's principal consultants.
 - 9. Copies of building permits.
 - 10. Copies of authorizations and licenses from governing authorities for performance of the Work.
 - 11. Report of pre-construction meeting.
 - 12. Certificates of insurance.
 - 13. Performance and payment bonds.
 - 14. Complete Submittals for each product or system included in the Application.
 - 15. Initial settlement survey and damage report.

16. Reference Point Survey.
17. Current Daily and Monthly Reports.
18. Initial Construction Photographs and/or videos.

1.5 STANDARD COST BREAKDOWN AT SUBSTANTIAL COMPLETION

- A. This Standard Cost Breakdown shall reflect any Certificates of Partial Substantial Completion issued previously for City occupancy of designated portions of the Work.
- B. Actions and submittals which shall proceed or coincide with this Standard Cost Breakdown include:
 1. Occupancy permits and similar approvals.
 2. Warranties (guarantees) and maintenance agreements.
 3. Test/adjust/balance records.
 4. Maintenance instructions.
 5. Utility meter readings.
 6. Start-up performance reports.
 7. Certified improvement survey.
 8. Change-over information related to City's occupancy, use, operation and maintenance.
 9. Final cleaning.
 10. Final progress photographs.
 11. List of incomplete Work (punch list), recognized as exceptions to Certificate of Substantial Completion.
 12. Record Documents.

1.6 FINAL STANDARD COST BREAKDOWN

- A. Actions and submittals which shall precede or coincide with submittal of the final Standard Cost Breakdown include the following:
 1. Project Closeout Form fully executed (signed).
 2. Completion of items specified for completion after Substantial Completion (punch list).
 3. Assurance that unsettled claims will be settled.
 4. Assurance that Work not complete and accepted will be completed without undue delay.
 5. Transmittal of required Project construction records to City/PRA.
 6. Proof that taxes, fees and similar obligations have been paid.
 7. Removal of temporary facilities and services.
 8. Removal of surplus materials, rubbish and similar elements.
 9. Change of door locks to City's access.

- END -

SECTION 012973
SCHEDULE OF VALUES (CURRENT ESTIMATE)

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section describes administrative requirements for each Prime Contractor's Schedule of Values, referred to as "Current Estimate" in the Standard Contract requirements.

1.2 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.

1.3 COORDINATION

- A. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:
 - 1. Contractor's Construction Schedule.
 - 2. Standard Cost Breakdown
 - 3. List of subcontractors.
 - 4. Schedule of allowances.
 - 5. Schedule of alternates.
 - 6. Schedule of submittals.
- B. Submit the Schedule of Values to the City no later than ten (10) days after receipt of the Notice to Proceed. Submit six (6) copies.

1.4 FORMAT AND CONTENT

- A. Arrange the Schedule of Values in a tabular form with separate columns to indicate the following for each item listed:
 - 1. Generic name.
 - 2. Related Specification Section.
 - 3. Name of subcontractor.
 - 4. Name of manufacturer or fabricator.
 - 5. Name of supplier.
 - 6. Change Orders (numbers) that have affected value.
 - 7. Dollar value.
 - 8. Percentage of Contract Sum to the nearest one-hundredth percent, adjusted to total 100 percent.
 - 9. Margins of Cost - Show line items for indirect costs, and margins on actual costs, only to the extent that such items will be listed individually in Standard Cost Breakdown. Each item in the Schedule of Values and Standard Cost Breakdown shall be complete including its total cost and

proportionate share of general overhead and profit margin unless otherwise indicated.

10. At the Contractor's option, temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown as separate line items in the Schedule of Values or distributed as general overhead expense.
11. Itemize separate line item cost for the following items under Division 1:
 - a. Field Engineering.
 - b. Construction Photographs.
 - c. Mock-up.
12. Itemize separate line item cost for each of the construction cost items under all applicable specification sections.
13. Itemize separate line item cost for each service contract.
14. Breakdown costs into:
 - a. Delivered cost of material, with taxes paid, with overhead and profit.
 - b. Installation cost, with overhead and profit.
 - c. If requested, break down high value line items to list major materials or operations.
 - d. Round off figures to nearest ten dollars.
 - e. Make sum total costs of all items listed in Schedule equal to Contract Limit.

1.5 UPDATING

- A. After review by the City, revise and resubmit schedules as required.
- B. Update and resubmit the Schedule of Values when change orders or construction change directions result in a change in the Contract Limit.

PART 2 PRODUCTS Not Used

PART 3 EXECUTION Not Used

- END -

SECTION 013113
PROJECT COORDINATION

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section describes each Prime Contractor's responsibilities to coordinate the work and related administrative procedures.

1.2 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.

1.3 SUBMITTALS

- A. Submit the following prior to or coincidental with the initial application for payment.
 - 1. List of contractor's staff assigned to the project and responsibilities including personnel on and off-site. Include mailing address, delivery address, phone, fax, mobile phone, etc. For at least three (3) staff, list phones where personnel can be reached during non-work hours for emergencies.
 - 2. List of contractor's consultants and sub-contractors with similar requirements as above.
 - 3. List of principal suppliers and fabricators with similar requirements as above. No emergency phone number required.

1.4 OBSERVATION OF WORK BY OTHERS

- A. Observation of the Work by the City/PRA, Design Professional, Inspection and Testing Agencies or any other party shall not be interpreted as relieving the Contractor from responsibility for coordination of all Work, superintendence of the Work, and scheduling and direction of the Work or any other requirement of the Contract.

1.5 GENERAL CONTRACTOR'S RESPONSIBILITIES

- A. Coordinate the Work and Schedules of each separate Prime Contractor.
- B. Coordinate construction activities included under each Prime Contractor to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Contracts that are dependent upon each other for proper installation, connection, and operation.
- C. Where installation of one part of the Work is dependent on installation of other components by other Prime Contractors, either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.
- D. Where availability of space is limited, coordinate installation by each Prime Contractor of different components to assure maximum accessibility for required maintenance, service and repair.

- E. Make adequate provisions to accommodate items scheduled for later installation.
 - F. Where necessary, prepare memoranda for distribution to each Prime Contractor outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings. Copy memoranda to City/PRA and Design Professional.
 - G. Coordinate compatibility of products furnished by each Contractor. Refer to Section 016001 Products and Materials, Division 1.
 - H. Administrative Procedures - Coordinate scheduling and timing of each Prime Contractor's required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of Contractors Construction Schedules and Schedules of submittals.
 - 2. Installation and removal of temporary facilities.
 - 3. Delivery and processing of submittals.
 - 4. Progress meetings.
 - 5. Project Closeout activities.
- 1.6 EACH PRIME CONTRACTOR'S RESPONSIBILITIES (including the General Contractor)
- A. Cooperate with the General Contractor's coordination efforts for orderly progress of the Work without delay or covering work which needs to be accessible to other Primes.
 - B. Coordinate the Work of associated sub-contractors.
 - C. Establish a Contractor's Construction Schedule and coordinate with General Contractor.
 - D. Maintain on the job-site at all times during the performance of the Work, a competent, English speaking superintendent.
 - E. Coordinate construction activities included under various Sections of these Specifications to assure efficient and orderly installation of each part of the work. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation, connection, and operation.
 - F. Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.
 - G. Make adequate provisions to accommodate items scheduled for later installation.
 - H. When necessary, prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings. Copy memoranda to City/PRA and Design Professional.
 - I. Coordinate compatibility of products. Refer to Products and Materials, Division 1.

- J. Administrative Procedures - Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of schedules.
 - 2. Installation and removal of temporary facilities.
 - 3. Delivery and processing of submittals.
 - 4. Progress meetings.
 - 5. Project Closeout activities.
- 1.7 LACK OF COOPERATION BETWEEN CONTRACTORS
- A. Delays attributable to lack of cooperation between the separate Prime Contractors and their sub-contractors shall not be recognized as a claim for delay. Claims by a contractor for costs due to such delays shall not be paid by the City/PRA.
 - B. Delays, including delays caused by lack of cooperation, shall result in penalties by the City/PRA as stipulated under paragraph 25e of the Standard Contract Requirements.
- 1.8 SUBCONTRACTOR'S RESPONSIBILITIES
- A. Comply with the direction of each Prime Contractor in coordination efforts listed above.

PART 2 PRODUCTS Not Used

PART 3 EXECUTION Not Used

- END -

SECTION 013119
PROJECT MEETINGS

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section specifies each Prime Contractor's administrative and procedural requirements for project meetings. Requirements contained herein in no way limit each Prime Contractor's responsibility to effectively communicate with parties involved in order to meet the requirements of the Contract.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.
- B. Project Coordination: Division 1.
- C. Construction Scheduling: Division 1.

1.3 ADMINISTRATION

- A. The Philadelphia Redevelopment Authority ("PRA") will schedule and administer the pre-construction meetings, periodic project meetings, pre-installation, coordination and other specially called meetings throughout the progress of the work. They will also:
 - 1. Prepare agenda for meetings.
 - 2. Distribute written notice of each meeting four (4) days in advance of meeting date.
 - 3. Make physical arrangements for meetings.
 - 4. Preside at meetings.
- B. During the course of the pre-construction meetings, periodic project meetings, pre-installation, coordination and other specially called meetings throughout the progress of the work, the Design Professional will:
 - 1. Record the minutes, including all significant proceedings and decisions.
 - 2. Reproduce and distribute copies of minutes within three (3) days after each meeting to: all participants in the meeting; and all parties affected by decisions made at the meeting.
- C. Representatives of Contractors, subcontractors and suppliers attending the meetings shall be qualified and authorized to act on behalf of the entity each represents.

1.4 PRE-CONSTRUCTION MEETING

- A. Attendance
 - 1. Project Coordinator.
 - 2. Design Professional's Representative.
 - 3. Prime Contractor's Representatives.
 - 4. Major subcontractors.

- B. Suggested Agenda
 - 1. Discussion of coordination of Prime Contracts.
 - 2. Discussion on major subcontracts and suppliers and projected construction schedules.
 - 3. Critical work sequencing.
 - 4. Major equipment deliveries and priorities.
 - 5. Project Coordination and designation of responsible personnel.
 - 6. Procedures and processing of field decisions, proposal requests, submittals, change orders and applications for payment.
 - 7. Procedures for maintaining Record Documents.
 - 8. Use of premises, office, work and storage areas, and City's requirements.
 - 9. Construction facilities.
 - 10. Temporary utilities.
 - 11. Housekeeping procedures.
 - 12. Dispute resolution.

1.5 PROGRESS, PRE-INSTALLATION AND COORDINATION MEETINGS

- A. Schedule regular and special meetings, as required by progress of the Work.
- B. Location of the Meetings - The Project field office of the Contractor [or as otherwise directed].
- C. Attendance
 - 1. Project Coordinator.
 - 2. Design Professional's Representative.
 - 3. Contractor's Representatives.
 - 4. Subcontractors as appropriate to the agenda.
 - 5. Suppliers as appropriate to the agenda.
 - 6. Others as appropriate.
- D. Suggested Agenda
 - 1. Review and approval of minutes of previous meeting.
 - 2. Review of work progress since previous meeting.
 - 3. Field observations, problems, and conflicts.
 - 4. Problems which impede Construction Schedule.
 - 5. Coordination issues between Prime Contractors.
 - 6. Review of off-site fabrication, delivery schedules.
 - 7. Corrective measures and procedures to regain projected schedule.
 - 8. Revisions to Construction Schedule.
 - 9. Plan progress, schedule, during succeeding work period.
 - 10. Coordination of schedules.

11. Review submittal schedules; expedite as required.
12. Maintenance of quality standards.
13. Review proposed changes for:
 - a. Effect on Construction Schedule and on completion date.
 - b. Effect on other contracts of the Project.
14. Review record drawings.
15. Other business.

PART 2 PRODUCTS Not Used

PART 3 - EXECUTION Not Used

- END -

SECTION 013216
CONSTRUCTION SCHEDULING

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section specifies administrative and procedural requirements for schedules prepared by each Prime Contractor.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.

1.3 CONSTRUCTION SCHEDULE

- A. Each Prime Contractor shall prepare a Contractor's Construction Schedule including all phases of work as follows:
1. Initial Construction Schedule - Within 10 (ten) calendar days after Notice to Proceed, submit an initial construction schedule. Break down at least by 16 Division Specification format for General Construction and into at least 12 operations for Electrical, Plumbing, or Mechanical Construction. This schedule must be in agreement with the time frame stated in the Bid Proposal. Coordinate schedule with the following:
 - a. Prepurchase products.
 - b. Allowances.
 - c. Application for Payments.
 - d. Mock-ups.
 - e. Schedule of Submittals.
 - f. Schedule of Values.
 2. Final Construction Schedule - Within 20 (twenty) calendar days after Notice to Proceed, submit a complete detailed construction schedule showing each activity having impact upon the timely completion of the Project. Activities shall be broken down generally similar to the individual specification sections but not less than 20 separate operations. The schedule shall include, but not be limited to the following:
 - a. Schedule each activity with a time limit per activity not to exceed ten (10) working days.
 - b. Time frames for testing of materials.
 - c. Time frames for shop fabrication and delivery of all parts of the work. Identify by specification section number and title. Coordinate with Schedule of Submittals. Allow time for reviews, resubmissions and approval.
 - d. Decision dates for selection of finishes and colors.
 - e. Decision dates for selection of products specified by allowances.
 - f. Deadlines for submissions of substitutions.
 - g. Identification for work of mock-ups, separate phases or other logically grouped activities.

h. Separate network for each trade or operation.

1.4 FORMAT

- A. Initial Construction Schedule - Horizontal bar chart form divided vertically by weeks.
- B. Final Construction Schedule - Horizontal bar chart form showing each trade or operation.

1.5 SCHEDULE OF SUBMITTALS

- A. Submit a preliminary Schedule of Submittals within 30 days after the Notice to Proceed. Submit the final schedule with the final Contractor's Construction Schedule.
- B. Coordinate submittal schedule with the list of subcontracts, schedule of values, submittal register and the Contractor's construction schedule.
- C. Coordinate scheduling of interrelated submissions to allow for review of required data and to avoid delays in reviewing submittals caused by lack of coordinated submission.
- D. Coordinate scheduling of submission to allow for approval of products prior to construction of mock-up.
- E. Contractor shall estimate number of resubmissions required for each submittal based on complexity. However, the submittal schedule in no way binds the City to approve a submittal to meet the submittal schedule or construction schedule. It is the contractor's sole responsibility to prepare acceptable submissions in a timely fashion in order to maintain schedule.
- F. Allow for City's and Design Professional's review of each submission and resubmission.
- G. Prepare the schedule in chronological order. Provide the following information:
 - 1. Related Section number.
 - 2. Submittal category.
 - 3. Name of subcontractor.
 - 4. Description of the part of the Work covered.
 - 5. Scheduled date for the first submittal.
 - 6. Scheduled date for resubmittal or resubmittals.
 - 7. Scheduled date the City's final release or approval.
- H. Distribution - Following response to initial submittal, print and distribute copies to the City, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the Project meeting room and field office.
- I. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

1.6 COORDINATION

- A. All Prime Contractors shall submit their schedules to the General Contractor.

- B. The General Contractor shall prepare an overall schedule including all trades and contracts.
- C. The City will resolve conflicts among schedules of various Prime Contractors.
- D. The General Contractor shall distribute copies of the approved final Construction Schedule to other Prime Contractors involved.

1.7 UPDATING

- A. Updating of the final Construction Schedule and Schedule of Submittals shall be required on a monthly basis.
- B. Show all changes occurring since previous submission of updated schedules.
- C. Indicate progress of each activity, show completion dates.
- D. Include major changes in scope, activities modified since previous updating, revised projections due to changes and other identifiable changes.

1.8 DISTRIBUTION

- A. Distribute copies of revised schedules to:
 - 1. Project Coordinator.
 - 2. Design Professional.
 - 3. Other Prime Contractors.
 - 4. Subcontractors.
 - 5. Other Concerned Parties (surety, insurance, etc.).
 - 6. Instruct recipients to report any inability to comply, and provide detailed explanation, with suggested remedies.

PART 2 PRODUCTS Not Used

PART 3 EXECUTION Not Used

- END -

SECTION 013233
CONSTRUCTION PHOTOGRAPHS

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section describes photographic services provided by the General Contractor required to record the progress of the work of all Prime Contractors.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.

1.3 SUBMITTALS

- A. Digital images – color images of each view, containing accurate camera-generated date/time stamp embedded in image, and sufficient background image to orient view to overall site if possible. For close-up images, include an additional photograph showing the relationship of close-up area to overall site. Forward electronic copies to City and Design Professional and retain copy for Contractor's files. Each individual photograph's electronic file to be named using the following naming convention using the date image was taken:

YYYY-MM-DD[space]Projectname[space](specific or general description as needed)

For example: 2018-10-28 Torresdale wall footing

- B. Submit hard copy images within text, or attached to end of, monthly progress reports.

PART 2 PRODUCTS

2.1 DIGITAL IMAGES (HARDCOPY INCLUDED IN MONTHLY REPORTS)

- A. Color
- B. 2 images maximum per 8.5" x 11" sheet.
- C. Minimum image size shall be 3 inches by 5 inches.
- D. Identify each image listing:
 - 1. Name of project.
 - 2. Orientation of view.
 - 3. Date and time stamp automatically recorded by camera within image.
 - 3. Name and address of photographer.

PART 3 EXECUTION

3.1 DIGITAL IMAGES (ELECTRONIC FILES)

- A. Take 30 initial photographs and 30 photographs (minimum) once monthly from points designated by the Project Coordinator, for the length of the Contract. First photographs shall be taken prior to start of construction. Include additional images as needed to memorialize key stages in construction process.
- B. Take photographs of installed subsurface features— especially underground utility locations — prior to backfilling or covering over, clearly showing orientation to overall site.

- END -

SECTION 013330

SUBMITTALS

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section describes each Prime Contractor's administrative and procedural requirements for submission of shop drawings, product data, samples and other required information.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.
- B. Submittal Schedule specified in Construction Scheduling, Section 013216.

1.3 WORK WITHOUT APPROVED SUBMITTALS

- A. City may withhold payment for the value of Work installed without first obtaining approved submittals, when submittal is required by individual specification sections. Refer to section 012900 "Payment Procedures".

1.4 SHOP DRAWINGS

- A. Shop drawings are Contractor's or subcontractor's Drawings made specifically for this Project, for use in fabrication and installation.
- B. Shop drawings must show sufficient data including layout, fabrication and erection details to establish evidence of conformance with design concept and compliance with the Contract Documents. Shop drawings must show relationships with adjacent construction.
- C. Do not use reproductions of Contract Drawings as Shop Drawings unless specifically permitted in the Contract Documents.
- D. Identify details by reference to sheet and detail numbers shown on Contract Drawings and by reference to paragraphs and specification section.
- E. Orient Shop Drawings in same manner as drawings.
- F. Manufacturer's Standard Schematic Drawings
 - 1. Modify drawings to delete information that is not applicable to Project. Drawings showing information which is not applicable or unaltered standard drawings shall be returned without review.
 - 2. Add supplemental information applicable to Project.

1.5 PRODUCT DATA

- A. Manufacturer's Catalog Sheets, Brochures, Diagrams, Schedules, Performance Charts, Illustrations and Other Standard Descriptive Data.
- B. Clearly mark each copy to identify materials, products or models applicable to this Project. Submittals not marked shall be returned without review.
- C. Show colors when required for evaluation, record or other purpose. Where product data is printed in color, submit all copies in original colors as published.

- D. Show dimensions and clearances required.
 - E. Show performance, characteristics and capacities.
 - F. Show wiring and piping diagrams, and controls.
 - G. Show by reference to paragraphs and specification section.
- 1.6 SAMPLES
- A. Samples: Actual samples of products proposed for use. Samples must be of sufficient size and quantity to clearly illustrate:
 - 1. Functional characteristics of product or material, with integrally related parts and attachment devices.
 - 2. Full range of color, texture and patterns.
- 1.7 FIELD SAMPLES AND MOCKUPS
- A. Erect at project site in location as directed.
 - B. Construct each sample or mock-up complete, including work of all trades required in the finished work.
 - C. Remove mockup at conclusion of work or when directed by City.
- 1.8 COORDINATION
- A. Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 - B. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
 - C. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
 - D. The City reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
 - E. When mock-ups are required, submittals for all products used in mock-up shall be coordinated with schedule for mock-up construction.
- 1.9 SUBMISSION REQUIREMENTS
- A. Comply with Schedule of Submittals.
 - B. Accompany each submission with a transmittal indicating project name, location, City's project number, referenced specification number, submission number, date, item submitted, Contractor's name, Sub-contractor, supplier or manufacturer.
 - 1. Transmittal shall include Contractors certification that information complies with Contract Documents.
 - 2. Indicate on transmittal or on submittal deviations from Contract Documents requirements.
 - C. Copies
 - 1. Submit two (2) prints of each shop drawing.

2. Submit five (5) copies of product data. One (1) copy will be retained by Design Professional.
 3. For sample selections, submit one (1) set. For sample approval, submit three (3) sets. The Design Professional will retain one (1) set.
- D. Where product data is printed in color and requires color for evaluation, record, or other purpose, all copies submitted shall be in original colors as published.
- E. In addition to information required on the transmittal, submittals shall include:
1. Relation to adjacent structure or materials.
 2. Field dimensions, clearly identified as such.
 3. Finishes.
 4. Shipping and operating weights
 5. Gauges, fastenings, reinforcements, welding details.
 6. Applicable standards, such as ASTM or Federal Specification numbers.
 7. A blank space, 3 inches by 10 inches for action stamp.
- F. Contractor's Review:
1. Contractor shall review each submittal and indicate approval with a stamp, dated, initialed and/or signed. Review shall include but not be limited to; verification of field measurements, coordination with all trades involved and compliance with Contract Documents. The Contractor shall not be relieved of responsibility for any deviation from the requirements of the Contract Documents by the City's or Design Professional's action on submittals unless the Contractor has given specific notice of deviation at the time of submission and written approval of the specific deviation is given. The Contractor shall not be relieved from responsibility for errors or omissions in submittals by the City's or Design Professional's approval thereof.
 2. If Contractor does not review submittals and provide the signed approval stamp before sending them to the Design Professional, they will be returned unchecked.

1.10 SUBMISSION ROUTING

- A. Forward submittal direct to Design Professional and fax copy of transmittal letter to Project Coordinator.
- B. Design Professional will forward Submittals marked as "Approved" or "Approved as Noted" to Project Coordinator.
- C. Design Professional will forward Submittals marked as "Revise and Resubmit" or "Rejected" back to Contractor and will fax copy of transmittal to Project Coordinator.
- D. Project Coordinator will forward Submittals back to Contractor and will fax copy of transmittal to Design Professional.

1.11 DESIGN PROFESSIONAL'S DUTIES

- A. Review submittals within 10 working days of receipt.

- B. Review for conformance to design concept of Project and for compliance with information given in Contract Documents. Review of separate item does not constitute review of an assembly in which item functions.
- C. Affix stamp and initials or signature certifying to review of submittal.
- D. Design Professional's action on submittals will result in the making of one of the following notations with related meanings:
 - 1. APPROVED: The work involved may proceed, and no further submission is required.
 - 2. APPROVED AS NOTED: The work involved may proceed incorporating comments. Annotations do not authorize changes to Contract Sum.
 - 3. REVISE AND RESUBMIT: The work involved may not proceed. Submittal must be corrected and resubmitted.
 - 4. REJECTED: The submittal is not in accordance with the Contract Documents, and a completely new submittal is required.
- E. In the event any comment made to the Submittal results in a claim for a change in the Contract, the Project Coordinator shall be notified immediately and fabrication may not be undertaken until contract modification procedures are completed.

1.12. CITY'S RESPONSIBILITY

- A. Review submittals within 5 working days of receipt.
- B. Review for compliance Contract Documents. Review of separate item does not constitute review of an assembly in which item functions.
- C. Affix stamp and initials or signature certifying to review of submittal.
- D. City's action on submittals will result in the making of one of the following notations with related meanings:
 - 1. NO EXCEPTION TAKEN: The work involved may proceed, and no further submission is required.
 - 2. MAKE CORRECTIONS NOTED, RESUBMISSION NOT REQUIRED: The work involved may proceed by incorporating comments. Annotations do not authorize changes to Contract Sum.
 - 3. REVISE AND RESUBMIT: The work involved may not proceed. Submittal must be corrected and resubmitted.
 - 4. SUBMIT SPECIFIED ITEM: Substitution of specified item not permitted.
 - 5. REJECTED: The work involved may not proceed. Submittal must be resubmitted.

1.13 RESUBMISSION REQUIREMENTS

- A. Identification of Changes - Clearly identify changes made from the initial submittal other than those requested by the Design Professional. The Design

Professional will review only those changes requested and those identified by the Contractor.

1.14 DISTRIBUTION OF APPROVED SUBMITTALS

- A. Contractor shall reproduce and distribute copies of submittals having the Design Professional's and City's stamp ("Approved" or "Approved as Noted") as required to coordinate and complete the Work and to records documents file.

1.15 SUBSTITUTIONS

- A. Substitutions submitted as a shop drawing, product data or sample will be returned without action.

PART 2 PRODUCTS Not Used

PART 3 EXECUTION Not Used

- END -

SECTION 013513.18

SPECIAL REQUIREMENTS FOR WORK WITHIN THE PHILADELPHIA PARKS & RECREATION SYSTEM

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This section describes special administrative and procedural requirements for all contractors, subcontractors and their employees performing work within the Philadelphia Parks & Recreation System under the jurisdiction of Philadelphia Parks & Recreation.

1.2 DEFINITIONS

- A. "Park Authorities" or "proper authorization" shall mean the Park Engineer or Project Manager unless specified otherwise.
- B. "Personnel" shall mean all employees or related staff or associates of the contractors, subcontractors, suppliers, delivery services, consultants, testing or inspection agencies, or other group performing work or services required for completion of this contract.

1.3 ADMINISTRATION REQUIREMENTS

- A. All Contractors must complete an Application for Permit (a form of which is attached to the end of this section). This Permit Application must be submitted to the Park Engineer and approved before the start of any work on Park property.
- B. All work is to be coordinated with the Park Engineer or designated representative to minimize disruption to the Parks & Recreation's daily operations, programs, and special events.

1.4 ACCESS, STAGING, STORAGE AND PROPOSED WORK

- A. All Contractors' must provide a Logistic Plan including access, staging, storage and the proposed work to be reviewed and approved by the Park Engineer.
- B. No parking of any vehicles or equipment on grass areas.
- C. Trees within proximity of work, plant materials, and historic features are to be protected from injury.
- D. Advise the Park Engineer of any hazardous materials proposed and provide all Material Safety Data Sheets for such materials.
- E. Truck tires to be free from mud when leaving work site. All truck and debris containers must be covered tightly to prevent dust and spillage.

1.5 PERSONNEL ACTIVITY

- A. The following items are prohibited from being brought into the Park areas and construction sites, any violation of these regulations may result in default of contract and may additionally be subject to prosecution:
 - 1. Alcoholic beverages and drugs.
 - 2. Explosives and firearms.
 - 3. Inflammable material except as required for performance of work (with prior Parks & Recreation approval).

PART 2 PRODUCTS Not Used

PART 3 EXECUTION Not Used

END

 PHILADELPHIA PARKS & RECREATION APPLICATION FOR PERMIT	SEND TO: PHILADELPHIA PARKS & RECREATION ONE PARKWAY BUILDING, 10TH FLOOR 1515 ARCH STREET PHILADELPHIA, PA. 19102	DATE OF APPLICATION:
APPLICATION FOR PERMIT TO: <input type="checkbox"/> ERECT POLES <input type="checkbox"/> REMOVE POLES <input type="checkbox"/> HAULING <input type="checkbox"/> CONTRACTUAL WORK IN PARK		
<i>Submit plans, if required, if temporary, state when poles will be removed.</i>		
<input type="checkbox"/> CONTRACTUAL WORK ON PRIVATE PROJECT (Adjacent to Park) <input type="checkbox"/> TEST BORING <input type="checkbox"/> TRUCK MOVEMENT ON PARK ROADS (List truck numbers under "Equip. to be Used") <input type="checkbox"/> OTHER:		
NAME OF COMPANY:	TELEPHONE:	PRINCIPAL TO CONTACT:
ADDRESS:	E-MAIL:	PERSON IN CHARGE OF OPERATION:
LOCATION: <i>(Specify job site)</i>		
LENGTH OF TIME TO COMPLETE: <i>(Give intended completion date)</i>		
WORK TO BE PERFORMED: <i>(Give details, if City Contract, give number and date)</i>		
EQUIPMENT TO BE USED: <i>(Give loaded and tare weights)</i>		
DO NOT WRITE BELOW - THIS AREA FOR PHILADELPHIA PARKS & RECREATION USE		
<input type="checkbox"/> PERMIT DISAPPROVED, REASON:		
<input type="checkbox"/> PERMIT APPROVED: This permit is issued to the company for the purpose and conditions stated in the application above with the following qualifications and conditions:		
<ol style="list-style-type: none"> 1. Permit is not valid for use by any subsidiary company unless listed below: 2. This permit is cancelled if any employee of the company uses it for purposes other than herein specified. 3. PP&R reserves the right to withdraw this permit and issue a "Stop Work Order," if work is being performed in an unsatisfactory manner. 4. Permittee will immediately stop work upon notification of PP&R Stop Work Order. 5. Permittee will restore any damage to turf, soils, sidewalks, or structures. 6. Permittee will restore areas of unauthorized damage to vegetation in accordance with "PPR/PWD - STANDARDS for NATIVE TREE and SHRUB PLANTING and HERBACEOUS SEEDING" specifications. 7. Permittee shall protect site and nearby areas from vehicle's tires, track, etc. by using plywood or other weight distribution materials. Permittee shall keep vehicles must stay off lawn, walks and trails. Must not block walks or trails. Permittee shall remove and dispose of drill spoils in accordance with all applicable laws. Permittee shall clearly mark all well caps. 8. Permittee shall repair all damage that occurs in connection with Permittee's work. 9. Permittee shall secure excavated areas either by fencing or a cap over the area, with proper signage. 10. Permittee shall post signage for pedestrians stating that site is a work area, closed to pedestrians. 11. Once excavation site is filled and tamped, Permittee shall place stakes and caution tape around it. 		
INSURANCE: Permittee must submit with this application a "Certificate of Insurance" that lists the City of Philadelphia as additionally insured and that complies with the attached insurance requirements.		
KEEP THIS PERMIT ON SITE AND WITH EACH VEHICLE AT ALL TIMES		
Additional Notes Below: Permittee, intending to be legally bound, agrees to comply with the attached provisions. Permittee shall cause each of its Contractors to comply with this Permit, including the attached provisions. A Violation of this Permit by any of Permittee's contractors is deemed a violation of this Permit by Permittee. This Permit is effective on date stated beneath the signature of the Park Manager (the " Effective Date ").		
TO:		_____ <i>Roger S. Tenant Jr, Park Manager, Philadelphia Parks and Recreation</i> _____ (Date)
CC:		

ZIEHLER PLAYGROUND AND BUILDING RENOVATION
 013513.18-2
SPECIAL REQUIREMENTS FOR WORK WITHIN THE
PHILADELPHIA PARKS & RECREATION SYSTEM

SECTION 014100
CODES, REGULATIONS AND STANDARDS

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section describes each Prime Contractor's responsibilities regarding codes, regulations and standards included in the Contract Documents by reference.

1.2 RELATED REQUIREMENTS

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.
- B. All technical sections.

1.3 APPLICABLE CODES AND REGULATIONS

- A. The following codes and regulations are applicable to the project. The list does not represent all codes, regulations and standards:
 - 1. The Philadelphia Building Construction and Occupancy Code
 - a. The Philadelphia Administrative Code
 - b. The Philadelphia Building Code
 - c. The Philadelphia Electrical Code
 - d. The Philadelphia Fire Prevention Code
 - e. The Philadelphia Mechanical Code
 - f. The Philadelphia Plumbing Code
 - g. The Philadelphia Property Management Code
- B. It is not the intent of the Contract Documents to conflict with any Code, or Regulation. Report any conflicts to Design Professional for clarification.

1.4 REFERENCED STANDARDS

- A. For products or workmanship specified by association, trade, or Federal Standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes or intended use.
- B. The referenced standards shall have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- C. Should specified reference standards conflict with Contract Documents, request clarification from Design Professional before proceeding but generally the more stringent requirement shall apply.
- D. In the absence of specific instructions in the specifications, materials, products, equipment, and their installation shall conform to the applicable codes, regulations and standards specified herein.

- E. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any referenced document.
- F. Dates of codes, regulations and standards specified shall be the latest date prior to the date of issue of this Project Manual, except where, prior to the date of issue of this Project Manual, modified or otherwise directed by the applicable codes and their supplements and amendments adopted by the code authorities having jurisdiction.
- G. Each entity engaged in construction of the Project shall be familiar with industry standards applicable to its construction activity. If unfamiliar, obtain copies and review with all workers. Obtain copies of standards when required by individual specification sections. Maintain copy at job site until Substantial Completion.

1.5 ASSOCIATIONS, INSTITUTIONS AND SOCIETIES

- A. Associations, Institutions, and Societies and their abbreviations if any, appearing in the Project Manual or elsewhere in the Contract Documents, shall be as generally recognized in the industry. Refer to the “Encyclopedia of Associations” published by Gale Research Company for abbreviations, addresses and phone numbers.

PART 2 PRODUCTS Not Used

PART 3 PRODUCTS Not Used

- END -

SECTION 014516.13
CONTRACTOR'S QUALITY CONTROL

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK

- A. This section describes each Prime Contractor's requirements for quality assurance including:
 - 1. Control of installation
 - 2. Tolerances
 - 3. Mockups
 - 4. Inspection and Testing services
 - 5. Manufacturer's field services

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.
- B. Each technical section required for materials and products in mockup
- C. Each technical section requiring independent inspection and testing.

1.3 QUALITY ASSURANCE – CONTROL OF INSTALLATION

- A. Each Prime Contractor is responsible to deliver Work of quality specified regardless Contractor's sub-contracting or purchasing arrangements.
- B. Monitor quality control over suppliers, manufacturer's products, services, site conditions and workmanship to produce Work of specified quality.
- C. Comply with manufacturers written instructions, including preparation and each step in sequence.
 - 1. Should manufacturer instructions differ from Contract Documents, request clarification but assume the more stringent will apply.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes or specified requirements indicate higher standards or more precise workmanship.
- E. Perform work by persons qualified to produce workmanship of specified quality.

1.4 TOLERANCES

- A. Monitor tolerance control of installed products to produce acceptable Work. Do not allow tolerances to accumulate.
- B. Comply with manufacturers written tolerances.
 - 1. Should manufacturer tolerances differ from Contract Documents, request clarification but assume the more stringent will apply.
- C. Adjust products to appropriate dimensions; position before securing products in place.

1.5 INSPECTION AND TESTING SERVICES

- A. Each Prime Contractor shall retain independent inspection and testing services when required by individual specification sections or by building code authority.
- B. The independent agency shall perform inspection and testing services on and off site as required by individual specification sections and as required to comply with requirements of the building code authority.
- C. Independent agency shall submit reports to Prime Contractor and direct to City indicating compliance or non-compliance. Notify City the same day of non-compliance.
- D. Cooperate with independent agency; furnish samples, mix designs, equipment, tools, storage, safe access, and assistance by incidental labor.
- E. Inspection and testing does not relieve Contractor to perform Work to contract requirements.
- F. Retesting required because of non-conformance to specified requirements shall be performed by the original agency at no additional cost to City.

1.6 MANUFACTURERS FIELD SERVICES

- A. When specified in individual specification sections, require manufacturer to provide qualified technical staff personnel to observe site conditions, quality of workmanship, start-up or training of City personnel as specified.
- B. Technical staff shall not be the local sales staff or independent manufacturers sales representatives.
- C. Manufacturers technical representative shall submit written reports of findings to Contractor and direct to City. Notify City the same day of non-compliance

PART 2 PRODUCTS Not Used

PART 3 EXECUTION Not Used

END

SECTION 015000
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section describes each Prime Contractor's construction facilities and services required for performance of the Work but not a permanent part of the finished construction. Included are temporary utilities, temporary construction and support facilities and security and protection services.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.
- B. Environmental Controls: Division 1.

1.3 SUBMITTALS

- A. Submit reports of tests, inspection, meter readings and similar procedures performed on temporary utilities.

1.4 INSPECTION

- A. Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certificates and permits.

PART 2 PRODUCTS

2.1 TEMPORARY MATERIALS

- A. Materials may be new or used, but must be adequate in capacity for the required usage and must not violate requirements of applicable codes and standards. Generally, temporary materials shall comply with related specification sections for materials to be incorporated into final work.

PART 3 EXECUTION

3.1 TEMPORARY UTILITIES

- A. Provide temporary utilities including water, drainage, electrical power, communications, lighting, and steam where applicable.
- B. Contractor shall pay all costs associated with temporary utilities.

3.2 TEMPORARY ELECTRICITY

- A. Provide electrical service adequate for work of all trades, and terminate in fused safety switch and circuit breaker distribution panels.
- B. For welding at site or electrical requirements beyond the capacity of temporary system, supply generator, fuel, maintenance, and other incidentals required.

3.3 TEMPORARY LIGHTING

- A. Provide temporary lighting required for construction operations
 - B. Provide temporary lighting for exterior staging and storage areas for security purposes.
 - C. Provide temporary lighting in interior work areas after dark for security purposes.
 - D. Provide lighting at each landing of each stair or ladder run.
 - E. Permanent building lighting may [not] be utilized during construction.
- 3.4 HEATING AND VENTILATING
- A. Provide temporary heat as required for construction operations. Temporary sources of heat shall be direct vented and thermostatically controlled. Open flame devices or solid fuels are not allowed.
 - B. Provide forced ventilation by portions of the permanent system or by portable units, to cure materials, to disperse humidity, and to prevent accumulations of dust, fumes, vapors, or gases. Provide ductwork with temporary filters to prevent the broadcasting of dust and debris.
 - C. In occupied facilities, while performing operations that generate fumes or dust, provide both fresh air intake and fan powered ventilation to control spread of fumes or dust to occupied areas of the building.
- 3.5 TEMPORARY TELEPHONE
- A. City telephones on-site may not be used by Contractors.
- 3.6 TEMPORARY WATER SUPPLY
- A. Provide temporary water service of adequate size as required for fire protection and construction operations.
 - B. Provide drinking water, paper cups, and waste receptacles for personnel.
- 3.7 SANITARY FACILITIES
- A. Provide sanitary facilities according to law at locations approved by the City. Provide privacy enclosures, toilet paper, waste receptacles, and periodic janitorial services.
 - B. Enforce use of sanitary facilities. Evidence to the contrary shall require removal, disinfecting, and reconstruction of defaced work or landscape.
 - C. The use of the Owner's toilet facilities by construction personnel will not be permitted.
- 3.8 FIRE PROTECTION
- A. Provide temporary fire protection and portable fire extinguishers according to law.
- 3.9 CONSTRUCTION AIDS
- A. Provide construction aids required for execution of the work, including scaffolds, staging, ladders, stairs, ramps, runways, platforms, railings, hoists, cranes, chutes, and other facilities and equipment.
 - B. Provide and operate drainage and pumping equipment; maintain excavations and site free of standing water. Coordinate with Division 2.
- 3.10 STAIRS AND ELEVATORS

- A. Designated existing stairs may be used by Construction personnel.

3.11 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas to allow for City's use of site, and to protect existing facilities and adjacent properties from damage from construction and demolition operations.
- B. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

3.12 FENCING

- A. Construction - Commercial grade chain link fence.
- B. Provide 6 foot high (min.) fence around construction site; equip with vehicular gates with locks.

3.13 EXTERIOR ENCLOSURES

- A. Provide temporary weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.
- B. Provide temporary tarps or other protection to roofs made open to weather by construction operations.

3.14 INTERIOR ENCLOSURES

- A. Provide temporary partitions to separate work areas from City occupied areas, to prevent penetration of dust and moisture into City occupied areas, to prevent damage to existing materials and equipment and as indicated.
- B. Construction - Steel stud framing and gypsum board with closed joints and sealed edges at intersections with existing surfaces.

3.15 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- C. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by covering with durable sheet materials.
- D. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- E. Prohibit traffic from landscaped areas.

3.16 SITE SECURITY

- A. The City assumes no responsibility for loss, theft, or damage to the work, tools, equipment, and construction. In the instance of any such loss, theft, or damage, the Contractor shall be responsible to renew, restore, or remedy the work, tools, equipment, and construction in accordance with requirements of the Contract Documents without additional cost to the City.

- B. The Contractor, at his own cost, may provide watchman services, and other means of site security.
- C. Site parked equipment, operable machinery, and hazardous parts of the new construction subject to mischief and accidental operation, shall be inaccessible, locked, or otherwise made inoperable when left unattended.
- D. Liability - The City is not responsible for damage, liability, theft, casualty, or other hazard to the automobiles or other vehicles, nor to injury including death to occupants of automobiles or other vehicles on the City's property. Provide signs to this effect in the designated parking area.

3.17 ACCESS ROADS AND PARKING AREAS

- A. Access Roads
 - 1. Use existing roads on Site for access. Protect roads from damage from extra heavy loading by use of timbers or other approved means.
- B. Parking Areas
 - 1. City will permit use of a designated area of the existing parking lot on the Site for exclusive parking of workmen's automobiles and of the automobiles of the Design Professional, Consultants, and other visitors having business at the Site.

3.18 PROJECT SIGN

- A Provide project identification sign, and temporary information and direction signs as required and approved. See Specification section 015800 for requirements.

3.19 TERMINATION AND REMOVAL

- A. Remove each temporary facility when the need has ended, or when replaced by authorized use of a permanent facility, but no later than Substantial Completion. Complete or restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired.
- B. Materials and facilities that constitute temporary facilities are property of the Contractor
- C. Remove temporary paving that is not intended for or acceptable for integration into permanent paving. Where the area is intended for landscape development, remove soil and aggregate fill that does not comply with requirements for fill or subsoil in the area. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances which might impair growth of plant materials or lawns. Repair or replace street paving, curbs and sidewalks at the temporary entrances, as required by the governing authority.

- END -

SECTION 015713
TEMPORARY EROSION AND SEDIMENTATION CONTROL

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. The work of this section includes all temporary erosion and sediment control and related and incidental operations, including:
 - 1. Compost Sock installation and maintenance.
 - 2. Inlet Protection installation and maintenance.
 - 3. Maintenance and repairs of erosion and sediment control measures.
 - 4. Temporary seeding.
- B. Related Requirements:
 - 1. Section 31000, "Site Cleaning"
 - 2. Section 31200, "Earth Moving"

1.3 REFERENCES

- A. Work and materials shall conform to the latest editions of the following standards:
 - 1. Pennsylvania Code, Chapter 102, Erosion and Sediment Control
 - 2. Pennsylvania Department of Environmental Protection, Erosion and Sediment Pollution Control Manual, latest edition.

1.4 ACTION SUBMITTALS

- A. All products used for erosion and sedimentation control which may include, but may not be limited to, compost sock, inlet protection, rock construction entrance, erosion control blanket, temporary seeding, other maintenance or erosion and sediment control measures.

1.5 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and methods needed for proper performance of the work of this Section.
- B. Codes and Standards: Perform work in compliance with applicable requirements of governing authorities having jurisdiction. Construction operations shall be carried out in a manner such that soil erosion, air pollution, and water pollution is minimized. State, County, and Municipal laws concerning pollution abatement shall be followed.
- C. The recommendations and Standards set forth in Chapter 102 of the Pennsylvania Code (Erosion and Sediment Control Handbook), published by the PA Department of Environmental Protection, shall be applicable where the work is not specifically detailed in this specification, the accompanying drawings or the Erosion and Sediment Control Plan.
- D. The Contractor shall take action to remedy unforeseen erosion conditions and to prevent damage to adjacent properties as a result of increased runoff and/or sediment displacement. Stockpiles of wood chips, hay bales, crushed stone, and other mulches shall be held in readiness to deal immediately with emergency problems of erosion. All erosion control checks and structures shall be inspected after heavy rainfalls, and if damaged, repaired or replaced.

PART 2 PRODUCTS

2.1 PRODUCTS

- A. All materials and products shall meet the approval of the engineer. Cut sheets for all items shall be submitted for review and approval prior to installation.
 - 1. Compost Socks shall be indicated on details.
 - 2. Inlet Protection shall be indicated on details.
 - 3. Erosion Control Blanket shall be Bionet SC150BN Extended Term Biodegradable Erosion Control Blanket by North American Green, distribute by Jobsite Products, Inc. Harleysville, PA, or approved equal.
 - 4. Seed Types shall be indicated on contract drawings.

5. Pumped water filter bags shall be as indicated on contract drawings.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

- A. All temporary erosion and sediment control measures indicated on the drawings and specified herein shall be in place before the beginning of any earthwork or site work phase.
- B. Erosion and sediment control measures shall be inspected weekly and after every precipitation event.
- C. Install compost sock and inlet protection according to manufacturer's directions.
- D. Inspect compost sock after every precipitation event.
- E. Remove (or spread) compost sock upon project completion and ground stabilization.
- F. Install Ground Stabilization Fabric and AASHTO #1 aggregate for Construction Entrance.
- G. Maintain clean stone layer throughout the course of construction.
- H. All graded or cleared areas shall receive temporary seeding if subject to erosion for a period of 72 hours or more. See Parts 3.9 and 3.10 of Section 312000, Earth Moving.
- I. Prepare area to be seeded by hand raking and grading prior to seeding.
- J. Temporary seeding shall consist of sod, a blend of turf-type tall fescue and Kentucky Blue Grass (100 percent by weight) or equivalent and shall be placed at 30 lbs per acre or 10 lbs per 1,000 square feet.
- K. Mulch newly seeded areas to prevent erosion prior to seed germination and stabilization.
- L. Provide adequate maintenance conforming to requirements of the City of Philadelphia Water Department.
- M. Remove sediment from compost socks, inlet protections, and pavement areas after each major storm event.

- END -

SECTION 015719
ENVIRONMENTAL CONTROLS

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section describes each Prime Contractors requirement for protection of the atmosphere, waterways, groundwater, plants, animal habitats, soils, etc., both on and off site.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.
- B. Earthwork in Division 2.

1.3 REGULATORY AGENCIES AND CODES

- A. Comply with the following in accordance with Division 1:
 - 1. United States Department of Agriculture (USDA)
 - 2. Urban Hydrology for Small Watersheds, Technical Release No. 55, Engineering Division, Soil Conservation Service.
 - 3. National Engineering Handbooks, Section 4 (Hydrology); Section 5 (Hydraulics); Section 16 (Drainage), Soil Conservation Service.
 - 4. City of Philadelphia

1.4 DEFINITIONS

- A. Sediment - Soil that has been eroded and transported by runoff water.
- B. Degradable Debris - Debris which can undergo biodegradation or combustion, or which can be dissolved in or suspended by water.
- C. Nondegradable Debris - Inorganic debris which will not disintegrate nor dissolve when exposed to moisture or water.
- D. Chemicals - Petroleum or cementitious products, bituminous materials, salts, acids, alkalis, herbicides and pesticides.
- E. Waste - Sewage, including domestic sanitary sewage, garbage, and trash.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Compost Sock: 5mil photo-degradable HDPE fabric, in-filled with weed-free, well-decomposed organic compost. Fabric sock "Siltsoxx" as manufactured by MCS Inc. (www.mcsnjinc.ocm) or approved equal.
- B. Silt Fences: Three (3) foot wide fabric designed to filter sediment, as manufactured by Mirafi, Inc. Amoco, or Exxon.

- C. Earth Stabilizer: Rye grass seed, hay, straw mulch, chemical stabilizer, or other devices approved by the environmental protection agency having jurisdiction and by the Design Professional.
- D. RipRap: Sizes as shown on drawings.

PART 3 EXECUTION

3.1 GENERAL

- A. Establish and enforce ecological preservation measures which will avoid pollution of the atmosphere, waterways, groundwater, plants, soils, animal habitats, landfills, wetlands, the site, adjacent sites, roadways, etc.
- B. Prevent spilling of chemicals or waste. Provide emergency plans and methods for abatement of accidental spills of toxic substances.

3.2 SEDIMENT CONTROL

- A. Until permanent work establishes sediment control, provide temporary control, using vegetative cover with seeding, mulch, and binder within [ten (10)] days after completion of grading of any given area.
- B. As a temporary measure, provide silt fences, arranged along the toe of surface drainage ways and inlets, in such a manner that water will pass through the silt fences and filter the sediment. Embed silt fence in ground 6 inches deep and anchor to the ground with posts, as shown on the drawings. Replace silt fences when they become clogged and ineffective.
- C. During pipe laying work, prevent silt from entering the piping systems by use of hay bales, silt fence, temporary closures of pipe ends, or other means as best suited to the conditions.

3.3 CONTROLS DURING EARTH MOVING

- A. Perform earth moving in phases to minimize the area and extent of exposed land.
- B. Control the rate of water runoff by diversion ditches, benches, berms, and other earth-formed shaping so that the rate of flow is retarded and silting shall be minimized. Reshape and restore conditions showing evidence of earth erosion.

3.4 DUST CONTROL

- A. Keep dust down at all times, including non-working days, weekends, and holidays. Wet down or treat disturbed soil with dust suppressers as required and approved.
- B. Do not leave areas of disturbed earth unworked for long periods of time. Provide temporary or permanent earth stabilization promptly.
- C. In sandblasting operations, confine the dust.
- D. Use wet-cutting methods for cutting concrete, asphalt, and masonry.
- E. Do not shake out bags containing dust-causing substances.

3.5 NOISE CONTROL

- A. Provide mufflers on internal combustion engine equipment. Maximum noise

level shall be 90 dbA at 50 feet.

- B. Where blasting is permitted, special permit and other requirements of the governing authorities regarding blasting shall govern.
- 3.6 C. Limit hours of operation of noisy construction to limits set by City ordinance.

DISPOSAL OF DEBRIS, CHEMICALS AND WASTE

- A. Legally dispose of debris, chemicals, and waste off the site
- B. Collect and contain materials before disposal in orderly fashion and by means which prevent contamination of air, water and soil.
- C. Store chemicals in watertight containers.
- D. Do not burn materials on the site.

3.7 TRUCKS

- A. Dump trucks shall be tarpaulin-covered so that spillage does not occur.
- B. Provide a gravel surfaced truck wheel washing area at entrances. Clean all truck wheels of mud and debris before the trucks leave the site

3.8 MAINTENANCE AND TERMINATION

- A. Maintain in working order environmental protection measures until they are no longer required.
- B. Terminate environmental control measures when there is no longer a threat of pollution. Remove temporary control measures. Complete or, if necessary, restore permanent construction that may have been delayed or damaged because of interference with environmental controls.

- END -

SECTION 015800

PROJECT IDENTIFICATION AND SIGNS

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

Requirements include the following which shall be provided by the Contractor for General Construction:

- A. Furnish, install and maintain project identification sign.
- B. Provide temporary on-site information signs to identify Owner's temporary relocation.
- C. Remove signs on completion of construction.
- D. Allow no other signs to be displayed without approval of owner.

1.2 RELATED REQUIREMENTS

- A. Section 011100 – Summary of Work
- B. Section 015000 – Temporary Facilities and Controls
- C. Section 0151719 – Environmental Controls

1.3 PROJECT IDENTIFICATION SIGN

- A. Two (2) digitally printed signs, not less than 4 feet x 8 feet, with graphic content as shown on sample exhibit (1) on the next page of this section.
- B. Erect/Fasten on the site at location shown on drawing or as directed by the owner.

1.4 INFORMATIONAL SIGNS

- A. Provide at all public entrances, stairways and temporary gates digitally printed signs with lettering indicating Owner's relocated address. Each sign to be 3 feet by 3 feet and up to 100 letters, with graphic content as shown on sample exhibit (2) on the next page of this section. Allow for a total of eight [8] signs.
- A. Erect/Install at appropriate locations to provide required information. Coordinate location with owner/owner's representative.

1.5 QUALITY ASSURANCE

- A. Digital Sign Printer: Professional experience in type of work required.
- B. Finishes: Adequate to resist weathering and fading for scheduled construction period.

PART 2 PRODUCTS

2.1 SIGN MATERIALS

- A. Sign surfaces: Dibond material (aluminum sheets with plastic core).
 - 1. Thickness: at least 3 millimeters
- B. Hardware used to secure sign: Galvanized bolts with plastic fasteners.

PART 3 EXECUTION

3.1 PROJECT IDENTIFICATION SIGN

- A. Sign should be printed/manufactured with style, sizes and colors shown on exhibit attached on page 3 of this section.

3.2 INFORMATION SIGNS

- A. Signs should be printed/manufactured in style, sizes and colors as shown in Exhibit 2
- B. Install at a height for optimum visibility, on ground-mounted poles or attached to temporary structural surfaces.

3.3 MAINTENANCE

- A. Maintain signs, fasteners, and hardware in a neat, clean condition; repair damaged sign if needed.
- B. Relocate informational signs as required by progress of work.

3.4 REMOVAL

- A. Remove signs, supports, fasteners at completion of project.

END OF SECTION

Sample – Exhibit 1 - PROJECT IDENTIFICATION SIGN



Note for Sample - Exhibit 1 -

City of Philadelphia and City Council logos are on ALL signs.

The following logos are dependent on project delivery and Owner (see below).


- PPR - only when site is a PPR site.
- FLP - only when site is a FLP site.
- PPR/FLP - need to show both when a co-located site exists.
- PHDC - logo used when project is being bid through PRA.
- Project User -logo used when project is bid through a Project User
- Funders – It may be required for funder logos to be included on the project sign. This will be at the direction of Rebuild.


Sample – Exhibit 2 - INFORMATION SIGNS (PPR & FLP)

OUR APOLOGIES
FOR THE INCONVENIENCE

Programs at this site
have temporarily
relocated. To find your
program's location,
please visit:

Rebuild.Phila.gov



 (Name of Site)

PLEASE EXCUSE OUR APPEARANCE!

While we make physical
improvements to this library, we
have temporarily relocated
library programming. To find your
program's location, please visit:



[libwww.freelibrary.org/locations/\(LibraryLink\)](http://libwww.freelibrary.org/locations/(LibraryLink))

 (Library Name)

Note for Sample - Exhibit 2

- PPR Info Sign - QR code to direct to the Rebuild.Phila.gov website
- FLP Info Sign – QR code to direct to the freelibrary.org website

SECTION 016001
PRODUCTS AND MATERIALS

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section describes administrative procedures regarding each Prime Contractor's selection of products, materials, and equipment required for the completion of the Work. Requirements for handling, storing and installing products are also included.

1.2 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.

1.3 DEFINITIONS

- A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties", "structure", "finishes", "accessories", and similar terms. Such terms are self-explanatory and have well recognized meanings in the construction industry.
- B. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material", "equipment", "system", and terms of similar intent.
- C. "Named Products" are items identified by manufacturer's product name, including make or model designation, indicated in the manufacturer's published product literature.
- D. "Materials" are products that are substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.
- E. "Equipment" is a product with operational parts, whether motorized or manually operated, that require service connections such as wiring or piping.
- F. "System" is an integrated assembly of materials and/or equipment which when combined form an integral whole to serve a function.

1.4 QUALITY ASSURANCE

- A. Source Limitations - To the fullest extent possible, provide products of the same kind, from a single source.
- B. Compatibility of Options - When the Contractor is given the option of selecting between two or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.
- C. Each Prime Contractor is responsible for providing products and construction methods that are compatible with products and construction methods of other prime or separate Contractors.

- D. If a dispute arises between prime Contractors over concurrently selectable, but incompatible products, the Design Professional will determine which products shall be retained and which are incompatible and must be replaced.
- E. Nameplates - Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view in occupied spaces or on the exterior.
- F. Labels - Locate required product labels and stamps on a concealed surface or, where required for observation after installation, on an accessible surface that is not conspicuous.
- G. Equipment Nameplates - Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface that is inconspicuous in occupied spaces. The nameplate shall contain the following information and other essential operating data:
 - 1. Name of product and manufacturer.
 - 2. Model and serial number.
 - 3. Capacity.
 - 4. Speed.
 - 5. Ratings.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store and handle products in accordance with the manufacturer's recommendations, using means and methods that will prevent damage, deterioration and loss, including theft.
- B. Schedule delivery in accordance with the Construction Schedule and to minimize long-term storage at the site and to prevent overcrowding of construction spaces.
- C. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damages, or sensitive to deterioration, theft and other losses.
- D. Deliver products to the site in the manufacturer's original sealed container or other packaging system, complete with legible labels and instructions for handling, storing, unpacking, protecting and installing.
- E. Inspect products upon delivery to ensure compliance with the Contract Documents, and to ensure that products are undamaged and properly protected.
- F. Store products at the site in a manner that will facilitate inspection and measurement of quantity of counting of units.
- G. Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.
- H. Store product subject to damage by the elements above ground, under cover in a weathertight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

1.6 OPERATION, MAINTENANCE, TRAINING AND CALIBRATION

- A. Furnish manuals and services specified and as required to start-up, operate and maintain all equipment and systems.

PART 2 PRODUCTS

2.1 GENERAL PRODUCT REQUIREMENTS

- A. Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, unused at the time of installation. All products shall be certified asbestos-free.
- B. Provide products complete with all accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for the intended use and effect.
- C. Where the work requires testing for assurance of performance, that portion of the work shall not proceed until such testing has been completed and written test report has been approved.
- D. Do not use material or equipment for any purpose other than for which it is designed or specified.
- E. Certification of Compatibility: If indicated, the material and equipment manufacturers shall certify in writing that:
 - 1. Other manufacturer's materials or equipment coming into contact with their product are compatible with their product in every way and that the intended performance of the system in which their product is incorporated will not be affected as a result of such contact. Also, physical breakdown of their product by chemical reaction or otherwise will not occur as a result of such contact.
 - 2. The combination of products by one (1) manufacturer to make up the manufacturer's specified system, will contribute to the performance of the system as intended, and will remain operational, reliable and durable. The manufacturer will be the source of routine maintenance and replacement parts.
- F. Reuse of Existing Material
 - 1. Except where indicated or otherwise approved in writing, materials and equipment removed from an existing structure shall not be used in the work.
 - 2. Where use of existing material is indicated or approved, use special care in removing, handling, storing, and reinstallation to assure proper function in the completed work.

2.2 PRODUCT SELECTION PROCEDURES

- A. Product selection is governed by the Contract Documents and governing regulations, not by previous Project experience. Procedures governing product selection include the following:
- B. Where products or manufacturers are specified by name, description, or performance accompanied by the term "or equivalent substitution", "or approved substitution", "or approved equal" or similar terms comply with the Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.

- C. Proprietary Specification Requirements - Where products or manufacturers are named, provide the product indicated or submit a substitution request.
- D. Descriptive Specification Requirements - Where Specifications describe a product or assembly, listing exact characteristics required, without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements. If descriptive specification also includes manufacturers or products, provide product indicated or submit a substitution request.
- E. Performance Specification Requirements - Where Specifications require compliance with performance requirements, provide products that comply with these requirements, and are recommended by the manufacturer for the application indicated. Compliance shall be certified by independent testing agencies furnished by manufacturer. General overall performance of a product is implied where the product is specified for a specific application.
- F. Manufacturer's recommendations may be contained in published product literature, or by the manufacturer's certification of performance.
- G. Compliance with Standards, Codes and Regulations - Where the Specifications require compliance with an imposed code, standard or regulation, select a product that complies with the standards, codes or regulations specified. Compliance shall be certified by independent testing agencies furnished by manufacturer.
- H. Visual Matching - Where Specifications require matching an established sample or existing construction, the Design Professional's decision will be final on whether a proposed product matches satisfactorily.
- I. Visual Selection - Where specified product requirements include the phrase "...as selected from manufacturer's standard colors, patterns, textures..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Design Professional will select the color, pattern and texture from the product line selected.
- J. Allowances - Refer to individual Specification Sections and "Allowance" provisions in Division 1 for allowances that control product selection, and for procedures required for processing such selections.

PART 3 EXECUTION

3.1 ACCEPTABLE INSTALLERS

- A. Installers shall be familiar with products and experienced in their installation. Comply with more stringent requirements of individual sections for installer qualifications.

3.2 EXAMINATION OF SUBSTRATE

- A. Each installer shall examine substrate onto which the product will be installed. Inspect for any condition which would in any way reduce the quality, performance or durability of the product including but not limited to; dimensional or location tolerances, dampness, dryness, installation not meeting specified criteria for substrate, poor workmanship, etc. Do not proceed with installation over unacceptable substrates. Notify Contractor to have substrate

repaired. Work installed over unacceptable substrates shall be redone after substrate is repaired at no cost to the City.

3.3 PREPARATION

- A. Protect adjacent work from possible damage which installation could cause including but not limited to staining, overspray, denting, gouging, displacement, etc.
- B. Clean and prepare substrates to receive products with primers, bonding agents, barrier coats, etc. as per manufacturer's instructions.

3.4 PASSAGE OF MATERIALS AND EQUIPMENT

- A. Establish passage clearances required to deliver and install materials and equipment.
- B. Where there will be insufficient clearance for passage of materials and equipment, deliver and protect such equipment before confining construction is installed.
- C. If existing structures, equipment and systems must be altered to provide passage of new materials and equipment, engage those skilled in the respective trade to restore structures, equipment, and systems to their original condition at no additional cost. Do not alter structure, equipment, or systems without written approval.
- D. In lieu of altering structures to provide passage of materials and equipment, provide materials and equipment that can be disassembled, brought into the building, and reassembled.
- E. If exterior windows or doors must be removed to provide passage of materials and equipment into the building, store and protect removed work at the site and reinstall as soon as possible. If any damage occurs to the work during their removal, transit, storage or reinstallation, replace or repair the work to like new condition at no cost to Owner.

3.5 INSTALLATION

- A. Comply with manufacturer's instructions and recommendations and requirements of individual specification sections in the applications indicated. If manufacturer's instructions and specifications indicate differing installation techniques, request clarification from Design Professional but generally comply with more stringent requirement.
- B. Anchor each product securely in place accurately located and aligned with other Work.
- C. Coordinate installation with surrounding Work to allow for optimum end product.

3.6 FIELD QUALITY CONTROL

- A. Have manufacturer's technical representative on-site to observe crucial installation steps as required by individual specification sections or as required to meet manufacturer's warranty or to meet other indicated criteria.

3.7 ADJUSTING

- A. Adjust installed products for proper operation and fit.

- END -

SECTION 017123
FIELD ENGINEERING

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. The General Contractor shall engage the services of a Surveyor to establish grades, lines and levels.
- B. Each separate Prime Contractor shall be responsible for layout of his own work, from grades, lines and levels established by the General Contractor.

1.2 RELATED REQUIREMENTS

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.

1.3 QUALITY ASSURANCE

- A. Surveyor shall be licensed in the Commonwealth of Pennsylvania.

1.4 SUBMITTALS

- A. Submit name, address, and telephone number of Surveyor prior to starting survey work.
- B. On request, submit documentation verifying accuracy of survey work.
- C. Submit reference point survey including field notes for record.
- D. Submit certification, signed and sealed by the Surveyor showing that elevations and locations of all improvements are or are not in conformance with Contract Documents.

1.5 PROJECT RECORD DOCUMENTS

- A. Maintain complete, accurate log of control and survey work as it progresses.
- B. Record on record documents all pertinent information under provisions of Division 1.

PART 2 PRODUCTS Not Used

PART 3 EXECUTION

3.1 INSPECTION

- A. Verify locations of survey control points prior to starting work. Promptly notify Design Professional of any discrepancies discovered.

3.2 SURVEY REFERENCE POINTS

- A. Protect survey control points prior to starting site work; preserve permanent reference points during construction. Make no changes without prior written notice to Design Professional.

- B. Promptly report to Project Coordinator destruction of any reference point or relocation required because of changes in grades or other reasons. Replace dislocated survey control points based on original survey control.

3.3 SURVEY REQUIREMENTS

- A. Use instruments to establish a minimum of two (2) permanent bench marks on the site. Reference benchmarks to data established by survey control points. Record bench mark locations with horizontal and vertical data for Project Record Documents. Reference these benchmarks to finish floor lines. Provide accurate alignment and level of the work, and correct slope and curvatures as required.
- B. Periodically verify layouts by same means. No extra charges will be allowed for differences between dimensions shown and actual measurements. Advise the Project Coordinator of any differences.
- C. Prepare as-built site utility plan showing all utilities including stormwater, sanitary, water, gas and electric lines for permanent record.

- END -

SECTION 017329
CUTTING, PATCHING, SLEEVES AND INSERTS

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section describes each Prime Contractor's cutting, fitting, patching, sleeves, and inserts required to complete the Work and to:
 - 1. Make the parts come together properly.
 - 2. Uncover or remove portions of the Work to provide for installation of ill-timed work.
 - 3. Remove and replace defective work.
 - 4. Remove samples of installed work for testing as specified.
 - 5. Provide penetrations for installation of piping and electrical conduit.
 - 6. Repair surfaces shown to remain in the finished work, which are damaged in the process of demolition.
 - 7. Coordinate penetrations, sleeves, and inserts that are specified in one specification section and installed by another.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.

1.3 REGULATORY REQUIREMENTS

- A. All cutting, fitting and patching shall be performed in compliance with governing code regulations relative to firestopping and smoke penetration.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Use materials that exactly match materials being cut or patched. If exact materials are not available, match with new materials with installed performance matching or exceeding cut or patched material. Comply with specifications and standards for each material involved.
- B. Sleeves and Inserts: as specified in the Trade Sections requiring inserts and sleeves for the installation of their work.

PART 3 EXECUTION

3.1 INSPECTION

- A. Inspect existing conditions, including work subject to damage or movement during cutting and patching.
- B. Report unsatisfactory conditions to the City. Do not proceed until directed.

3.2 PREPARATION

- A. Provide temporary support as required to maintain the structural integrity of work.
- B. Provide materials and methods to protect other work from damage, including exposure to the elements.

3.3 PERFORMANCE

- A. Do not cut or alter the work of another Prime Contractor without written consent of the City.
- B. Perform cutting of structural steel, structural concrete or load bearing unit masonry only after approval of the City.
- C. Execute cutting and demolition by methods that will prevent damage to other work, and provide proper surfaces to receive installation of repairs.
- D. Remove excess materials resulting from cutting and patching and dispose of legally off site.
- E. Perform excavating and backfilling by methods that will prevent settlement or damage to other work. Maintain excavations free of water.
- F. Where cutting and patching of materials provided under this Contract is required, employ the original installer or fabricator to perform cutting and patching of:
 - 1. Structural steel and concrete.
 - 2. Weather-exposed elements.
 - 3. Moisture- or corrosion-resistant elements.
 - 4. Sight-exposed finished surfaces.
- G. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances and finishes.
- H. Restore work to remain, or be reused, which has been cut or removed. Install new products to provide complete work in accordance with Contract Documents.
- I. Refinish entire surface to provide an even finish to match adjacent surfaces. For continuous surfaces, refinish to nearest intersection. For an assembly, refinish the entire unit.
- J. Furnish sleeves and inserts required under individual specification sections to Contractor installing the Work to be sleeved or to have insert embedded. Be responsible for their correct location and installation.
- K. Penetrations required, but not shown on the Drawings, shall be cut into the work.

- END -

SECTION 017419
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for the following:
 - 1. Salvaging nonhazardous demolition and construction waste.
 - 2. Recycling nonhazardous demolition and construction waste.
 - 3. Disposing of nonhazardous demolition and construction waste.

1.02 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition and construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition and construction waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of demolition and construction waste and subsequent incorporation into the Work.

1.03 PERFORMANCE REQUIREMENTS

- A. General: Develop waste management plan that results in end-of-Project minimum rates for salvage/recycling of 75 percent by weight of total waste generated by the Work.
 - 1. Identify materials targeted for salvage and recycling.

1.04 SUBMITTALS

- A. Waste Management Plan: Submit via e-Builder within 7 days of date established for the Notice to Proceed.
 - 1. Plan shall identify the diversion goals of the project, relevant construction debris

and materials diverted, implementation protocols, and parties responsible for implementation

- B. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit via e-Builder. Include separate reports for demolition and construction waste. Include the following information:
1. Material category.
 2. Generation point of waste.
 3. Total quantity of waste in tons.
 4. Quantity of waste salvaged, both estimated and actual in tons.
 5. Quantity of waste recycled, both estimated and actual in tons.
 6. Total quantity of waste recovered (salvaged plus recycled) in tons.
 7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
- C. Waste Reduction Calculations: Before request for Substantial Completion, submit 3 copies of calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.
- D. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- E. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- F. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- G. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- H. LEED Submittals:
1. Construction Waste Management Plan as outlined above.
 - a. Included LEED requirements for Credit MR 2 as defined in the LEED 2009 BD+C Reference Manual.
 2. For commingled waste, provide documentation verifying the diversion rate of the waste. Documentation can be either a project-specific diversion rate provided by the sorting facility or the average annual recycling rate for the sorting facility

provided by the regulating local or state government authority.

3. Complete LEED letter template on LEED Online for Credit MR 2, tabulating total waste material, quantities diverted and means by which it is diverted. Upon request submit a statement that requirements for the LEED Credit have been met.
 - a. Land clearing debris such as soil, vegetation and rocks are to be excluded from the calculations.
 - b. Hazardous materials are the responsibility of the Owner and are to be excluded from calculations.
 - c. Units to be consistent for all calculations (either tons or cubic yards).

I. Qualification Data: For refrigerant recovery technician.

J. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

1.05 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.
- B. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Waste Management Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to waste management.

1.06 WASTE MANAGEMENT PLAN

- A. General: Develop plan consisting of waste identification, waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
 1. Include separate sections in plan for demolition and construction waste.
- B. Waste Identification: Indicate anticipated types and quantities of demolition and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.
 1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before

incorporation into the Work.

2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
5. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
6. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where materials separation will be located.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 PLAN IMPLEMENTATION

- A. General: Implement waste management plan as approved by Owner. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
- B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan. Coordinator shall be present at Project site full time for duration of Project.
- C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
 1. Distribute waste management plan to everyone concerned within three days of submittal return.
 2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
2. Comply with Division 01 Section "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.02 SALVAGING DEMOLITION WASTE

A. Salvaged Items for Reuse in the Work:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until installation.
4. Protect items from damage during transport and storage.
5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.

B. Salvaged Items for Sale and Donation: Not permitted on Project site.

C. Salvaged Items for Owner's Use:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area designated by Owner.
5. Protect items from damage during transport and storage.

3.03 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.

B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.

C. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical.

1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.

- a. Inspect containers and bins for contamination and remove contaminated materials if found.
2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
4. Store components off the ground and protect from the weather.
5. Remove recyclable waste off Owner's property and transport to recycling receiver or processor.

3.04 RECYCLING DEMOLITION WASTE

- A. Asphaltic Concrete Paving: Break up and transport paving to asphalt-recycling facility.
- B. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.
- C. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.
 1. Clean and stack undamaged, whole masonry units on wood pallets.
- D. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.
- E. Metals: Separate metals by type.
 1. Structural Steel: Stack members according to size, type of member, and length.
 2. Remove and dispose of bolts, nuts, washers, and other rough hardware.
- F. Asphalt Shingle Roofing: Separate organic and glass-fiber asphalt shingles and felts. Remove and dispose of nails, staples, and accessories.
- G. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.
- H. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.
 1. Separate suspension system, trim, and other metals from panels and tile and sort with other metals.
- I. Carpet and Pad: Roll large pieces tightly after removing debris, trash, adhesive, and tack strips.

1. Store clean, dry carpet and pad (if present) in a closed container or trailer provided by Carpet Reclamation Agency or carpet recycler.
- J. Equipment: Drain tanks, piping, and fixtures. Seal openings with caps or plugs. Protect equipment from exposure to weather.
- K. Plumbing Fixtures: Separate by type and size.
- L. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.
- M. Lighting Fixtures: Separate lamps by type and protect from breakage.
- N. Electrical Devices: Separate switches, receptacles, switchgear, transformers, meters, panelboards, circuit breakers, and other devices by type.
- O. Conduit: Reduce conduit to straight lengths and store by type and size.

3.05 RECYCLING CONSTRUCTION WASTE

- A. Packaging:
 1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
 2. Polystyrene Packaging: Separate and bag materials.
 3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
 4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- B. Site-Clearing Wastes: Chip brush, branches, and trees on-site or at landfill facility. Do not include land clearing debris such as soil, vegetation and rocks in LEED calculations.
- C. Wood Materials:
 1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
 2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.
- D. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location.

3.06 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.
- C. Disposal: Transport waste materials off Owner's property and legally dispose of them.

- END -

SECTION 017423

CLEANING

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section specifies each Prime Contractor's cleaning of the Work during construction and before completion.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.
- B. Additional cleaning is specified under the technical sections for that work.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Use only cleaning materials recommended by manufacturer of surface to be cleaned.
- B. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 EXECUTION

3.1 PERIODIC CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Broom clean paved surfaces. Rake clean other surfaces of grounds. Remove snow and ice from access to building.
- C. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- D. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- E. Collect and remove waste materials, debris, and rubbish from site at least weekly and dispose of legally off-site.
- F. Open free-fall chutes not permitted. Terminate closed chutes into appropriate containers with lids.
- G. Clean mechanical equipment, ductwork and replace filters as specified under Division 23.
- H. Clean electrical work including lighting fixtures as specified under Division 26.
- I. Maintain cleaning until Project or portion thereof is accepted by Certificate of Substantial Completion. If minor work is required after Substantial Completion, clean affected areas afterwards.

3.2 FINAL CLEANING

- A. Immediately before observation of the Work for Substantial Completion, clean all sight-exposed surfaces. Clean all ledges and other horizontal or near horizontal surfaces that may not be sight-exposed but are contiguous to finished spaces.
- B. At Substantial Completion, clean and renovate permanent facilities that have been used during the construction period, including but not limited to:
 - 1. Replace significantly worn parts and parts that have been subject to unusual operating conditions.
 - 2. Replace lamps that are burned out or noticeably dimmed by substantial hours of use.

- END -

SECTION 017700
CLOSEOUT PROCEDURES

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section specifies each Prime Contractor's administrative and procedural requirements for project closeout.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.

1.3 SUBSTANTIAL COMPLETION

- A. When the work is considered substantially complete, submit a written notice to the PRA that the Work, or a designated portion thereof, is substantially complete. Include a list of all items that require completion or correction.
- B. Within a reasonable time after receipt of such notice, an inspection by the PRA/City will be made to determine the status of completion.
- C. If the Work is not considered substantially complete; the Contractor will be notified in writing, giving the reasons therefore.
- D. Contractor shall remedy the deficiencies in the Work, and send a second written notice of substantial completion. This notice shall include a statement of action taken on each item noted as requiring correction or completion to achieve "Substantial Completion" status.
- E. The Work will be inspected a second time and if not considered substantially complete, the two steps in paragraphs A and B above will be repeated.
- F. When the PRA/City concurs that the Work is substantially complete, they will:
 - 1. Prepare a Certificate of Substantial Completion, accompanied by Contractor's list of items to be completed or corrected, as verified and amended by the PRA.
 - 2. Submit the Certificate to Contractor for written notice of the responsibilities assigned in the Certificate.
- G. Contractor shall prepare Application for Payment at Substantial Completion and complete administrative and submittal requirements per Section 012900 Payment Procedures.

1.4 FINAL OBSERVATION

- A. When the Work is considered complete, submit written certification that:
 - 1. Contract Documents have been reviewed.
 - 2. Work has been inspected by the Contractor and has been completed in compliance with Contract Documents.
 - 3. Equipment and systems have been tested in the presence of the Project Coordinator and are operational.

4. Work is ready for final observation.
- B. Inspection by the PRA/City will be made to verify the status of completion with reasonable promptness after receipt of such certification.
- C. If the Work is not considered complete; the Contractor will be notified in writing, listing the incomplete or defective Work.
- D. Contractor shall take immediate steps to remedy the stated deficiencies, and, after correcting deficiencies, he shall send a second written certification that the Work is complete. This certification shall itemize each deficiency noted and a statement of action taken to remedy or complete the Work.
- E. The Work will be observed a second time and if not considered substantially complete, the two steps in paragraphs A and B above will be repeated.
- F. When the Work is acceptable under the Contract Documents, the Contractor shall be requested to make closeout submittals.

1.5 ADDITIONAL OBSERVATION FEES

- A. Should more than two observations at substantial or final completion and/or for required mock ups be required due to failure of the Work to comply with the claims of status of completion made by the Contractor:
 1. PRA will compensate the Design Professional for such additional services.
 2. PRA will deduct the amount of such compensation from the final payment to the Contractor.

1.6 CLOSEOUT SUBMITTALS

- A. When the Work is complete submit the following:
 1. Evidence of compliance with requirement of governing authorities as follows:
 - a. Certificate of Occupancy.
 - b. Certificates of Inspection for Work requiring Certificate of Inspection by governing authority.
 - c. Certificate and Reports of Inspection, Testing and Approval.
 2. Project Record Documents as specified under Division 1.
 3. Operation and Maintenance Manuals as specified under Division 1.
 4. Warranties as specified under Division 1.
 5. Keys and Keying Schedule as specified under Finish Hardware - Division 8.
 6. Spare Parts and Maintenance Materials as specified.
 7. Evidence of Payment and Release of Liens to the requirements of General and Supplementary Conditions.
 8. Requirements for Final Payment Application per Section 012900 Payment Procedures, Division 1.
 9. Consent of Surety.

1.7 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Furnish spare parts and maintenance materials as specified under various Sections of the Specifications.
 - B. Package and label parts and materials as directed and store in area of the building where directed by the PRA.
- 1.8 FINAL ADJUSTMENT OF ACCOUNTS
- A. Submit a final statement of accounting.
 - B. Statement shall reflect all adjustments to the Contract Sum:
 - 1. The original Contract Sum.
 - 2. Additions and deductions resulting from:
 - a. Previous Change Orders.
 - b. Change Orders caused by substitutions including deductions for review.
 - 3. Deductions for uncorrected Work.
 - 4. Deductions for re-inspection payments.
 - 5. Other adjustments.
 - 6. Total Contract Sum, as adjusted.
 - 7. Previous payments.
 - 8. Sum remaining due.
 - C. The PRA will prepare a final Change Order, reflecting approved adjustments to the Contract Sum which were not previously made by Change Orders.
- 1.9 FINAL APPLICATION FOR PAYMENT
- A. Submit the final Application for Payment in accordance with procedures and requirements stated herein.
- PART 2 PRODUCTS Not Used
- PART 3 EXECUTION
- 3.1 Sample Certificate of Substantial Completion Form, see Project Coordinator for actual form.

- END -

SECTION 017823
OPERATION AND MAINTENANCE MANUALS

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section describes each Prime Contractor's procedural requirements for compiling and submitting operation and maintenance data.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.
- B. Individual Specifications Sections: Specific requirements for operation and maintenance data.

1.3 QUALITY ASSURANCE

- A. Prepare instructions and data by personnel experienced in maintenance and operation of described products.

1.4 FORMAT

- A. Prepare data in the form of an instructional manual.
- B. Binders: Commercial quality, 8-1/2 by 11 inch three ring binders with plastic covers. When multiple binders are used, correlate data into related consistent groupings.
- C. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.
- D. Provide tabbed flyleaf, indexed for each separate product and system, with typed description of product and major component parts of equipment.
- E. Text: Manufacturer's printed data or typewritten data.
- F. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- G. Contents: Prepare a Table of Contents for each volume, with each Product or system description identified, in three parts as follows:
 - 1. Part 1: Directory, listing names, addresses, and telephone numbers of Design Professional, Contractor, Subcontractors, and major equipment suppliers.
 - 2. Part 2: Operation and maintenance instructions arranged by system and subdivided by specification section. For each category, identify names, addresses and telephone numbers of Subcontractors and suppliers. Identify the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.

- d. Operating instructions.
 - e. Maintenance equipment for equipment and systems.
 - f. Maintenance instructions for [special] finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
3. Part 3 - Project documents and certificates, including the following:
- a. Shop drawings and product data.
 - b. Air and water balance reports.
 - c. Certificates.
 - d. Photocopies of warranties and bonds.

H. Data

- 1. For Each Product or System - List names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- 2. Product Data - Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- 3. Drawings - Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawing.

1.5 MANUAL FOR MATERIALS AND FINISHES

- A. Building Products, Applied Materials, and Finishes: Include product data, with catalog number, size, composition, and color and texture designations. Provide information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- C. Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
- D. Additional Requirements: As specified in individual Product Specification sections.

1.6 MANUAL FOR EQUIPMENT AND SYSTEMS

- A. Each Item of Equipment and Each System: Include description of unit or system, and component parts. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and model number of replaceable parts.
- B. Panelboard Circuit Directories - Provide electrical service characteristics, controls, and communications.
- C. Include color-coded wiring diagrams as installed.

- D. Operating Procedures - Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shutdown and emergency instructions. Include summer, winter, and any special operating instructions.
- E. Maintenance Requirements: Include routine procedures and guide for disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- F. Troubleshooting: Include step-by-step chart listing common problems with appropriate repairs.
- G. Provide servicing and lubrication schedule, and list of lubricants required.
- H. Include manufacturer's printed operation and maintenance instructions.
- I. Include sequences of operation by controls manufacturer.
- J. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- K. Provide control diagrams by controls manufacturer as installed.
- L. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- M. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- N. Include test and balancing reports as specified.
- O. Additional Requirements - As specified in individual Product specification sections.
- P. Where the complexity of machinery is such that regular maintenance by a specialty service company is normal, or may be required by law, give notice thereof in writing.

1.7 INSTRUCTION OF CITY PERSONNEL

- A. Before final inspection, instruct City's designated personnel in operation, adjustment, and maintenance of products, equipment, and systems, at agreed upon times.
- B. For equipment requiring seasonal operation, perform instructions for other seasons within two (2) months.
- C. Use operation and maintenance manuals as basis for instruction. Review contents of manual with personnel in detail to explain all aspects of operation and maintenance.
- D. Prepare and insert additional data in Operation and Maintenance Manual when need for such data becomes apparent during instruction.

1.8 SUBMITTALS

- A. For equipment, or component parts of equipment put into service during construction and operated by City, submit documents within ten days after acceptance.
- B. Submit 2 copies of completed volumes fifteen (15) days prior to final inspection. This copy will be reviewed and returned after final observation, with comments. Revise content of all document sets as required prior to final submission.
- C. Submit six (6) sets of revised final volumes in final form prior to or coincidental with Final Application for Payment.

PART 2 - PRODUCTS Not Used

PART 3 - EXECUTION Not Used

- END -

SECTION 017836

WARRANTIES

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section describes each Prime Contractor's procedural requirements for executing, assembling and submitting warranties.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.
- B. Individual Specification sections requiring warranties or service/maintenance contracts.

1.3 SUBMITTAL REQUIREMENTS

- A. Submit two (2) sets of original signed copies of warranties, bonds, service and maintenance contracts, executed by the respective manufacturers, suppliers, and subcontractors.
- B. Contents - Neatly type, in orderly sequence, the following information for each item.
 - 1. Product or work item.
 - 2. Subcontractor supplier and manufacturers names, addresses, and telephone numbers.
 - 3. Date of beginning and duration time of warranty, bond, or service and maintenance contract.
 - 4. Proper procedure in case of failure.
 - 5. Instances which might affect the validity of warranty or bond.
- C. Bind each set in 8 1/2 inch by 11 inch commercial quality, three-ring binders with plastic covers. Identify each binder with typed or printed title "Warranties" with title of project and location.

1.4 TIME OF SUBMITTALS

- A. For equipment or component parts of equipment placed into service during progress of construction, submit documents within ten (10) days after inspection and acceptance.
- B. Make other submittals within ten (10) days after Date of Substantial Completion, prior to final request for payment.
- C. For items of work, where acceptance is delayed materially beyond the Date of Substantial Completion, provide updated submittal within ten (10) days after acceptance, listing the date of acceptance as the start of the warranty period.

PART 2 PRODUCTS Not Used

PART 3 EXECUTION Not Used

- END -

SECTION 017839
PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section describes each Prime Contractor's administrative and procedural requirements for recording final product and material selections, changes to the Contract, and recording Work concealed by subsequent construction.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Applicable provisions of Bidding Requirements, Contract Requirements in Division 0 and all applicable Division 1 sections.

1.3 MAINTENANCE OF DOCUMENTS

- A. Maintain at job site, one (1) copy of record documents including Drawings, Specifications, Addenda, Change Orders and other modifications, Shop Drawings, product data and samples.
- B. In addition, maintain one (1) copy of field orders or written instructions, field test records, testing and inspection reports, progress reports, meeting minutes and construction photographs.
- C. Maintain documents in a clean, dry, legible condition and in good order.
- D. Make documents available at all times for inspection.
- E. Review documents at progress meetings.

1.4 RECORDING

- A. Neatly label each document and binder with "Project Record" and project name and location.
- B. Record information concurrently with construction progress.
- C. Do not conceal any work until required information is recorded.
- D. Record Construction Drawings and Shop Drawings: Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
 - 1. Note horizontal and vertical locations of concealed elements, referenced to permanent, visible features.
 - 2. Note field changes of dimension and detail.
 - 3. Note details not on original Contract Drawings.

- E. Record Project Manual: Mark to show substantial variations in actual Work performed in comparison with the text of the original. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation. Note related record drawing information and Product Data.
- F. Record Product Data: Maintain one copy of each Product Data submittal. Mark documents to show significant variations in actual Work performed in comparison with information submitted. Give particular attention to concealed products and portions of the Work that cannot otherwise be readily discerned later by direct observation. Note related Change Orders and mark-up of record drawings and Specifications.

1.5 SUBMITTALS

- A. Preceding or coincidental with the final pay application, submit the following:
- B. Record Construction Drawings: One (1) set of reproducible Mylar transparencies showing all clearly-indicated notations specified above, and including notation "AS BUILT DRAWINGS" with submission date and General Contracting company's information grouped together near the titleblock's original date. Transparencies of the Design Professional's drawings may be used for this purpose upon reimbursement of the printing costs to the Design Professional.
- C. Record Shop Drawings: One (1) copy of any shop drawings.
- D. Record Project Manual: One (1) copy bound in 3 ring binder(s).
- E. Record Product Data: One (1) copy organized by CSI format bound in 3 ring binder(s).
- F. If review of Record Documents reveals noncompliance with Contract Documents, errors or omissions, Contractor shall correct deficiencies and resubmit.

PART 2 PRODUCTS Not Used

PART 3 EXECUTION Not Used

- END -

BID NO. _____

PREQUAL BID #

ACTUAL BID #

2022

City of Philadelphia

Water Department

WORK NO. S-50329-G

BIDDING REQUIREMENTS, CONTRACT FORMS
and
SPECIAL SPECIFICATIONS
for
CONSTRUCTION OF GREEN STORMWATER INFRASTRUCTURE
in
E OLNEY AVE FROM EDGE OF PROPERTY TO "B" STREET
"B" STREET FROM CLARKSON AVE TO E OLNEY AVE

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BIDDING REQUIREMENTS, CONTRACT FORMS, AND GENERAL CONDITIONS

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01125	Contractor Requirements for Confined Space Entry
01570	Traffic Regulations

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ATTACHED

-----	Appendix A – Maintenance of Traffic Requirements
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-----	Appendix H – Spare Parts Delivery List
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-----	Appendix M – Monthly Planting Project Status Report

----- SECTION 01101

COORDINATION WITH PHILADELPHIA WATER DEPARTMENT

PART 1 GENERAL

1.01 SUMMARY

- A. All work and items for installation of stormwater infrastructure shall adhere to the following specification. Nothing in this Section shall relieve the Contractor of any requirement set forth in the drawings and general provisions of the Contract, including General and Supplementary Conditions, Contract Addenda, and other Specification Sections. In any case where provisions of this Section differ from or conflict with other requirements of the Contract Documents, Owner and PWD, in their sole discretion, shall coordinate and provide combined guidance to Contractor through Owner's Project Administrator. Absent such guidance, the more stringent requirement will apply to Contractor.

1.02 SCOPE OF WORK

- A. This work includes all work necessary to install complete and fully usable green stormwater infrastructure surface and sub-surface features in the project areas as shown and described in the Contract Documents. In general, the work includes sawcutting and removal of existing sidewalk and paving; excavation of trenches and disposal of material; excavation and grading of rain gardens, installation of clean washed stone and geotextile; installation of thermoplastic, ductile iron and VCP drainage pipe and fittings, cleanouts and riser structures; installation of energy dissipaters; installation of observation wells; installation of trench drains; installation of new stormwater inlets, control structures and laterals; installation and modification of existing inlets, restoration of sidewalks, curbs and streets; planting of trees and landscaping, and placement and grading of specified stormwater and planting soils.
- B. Construction shall not begin until all erosion and sedimentation control facilities have been installed and approved by the Philadelphia Water Department (PWD). The Contractor shall minimize disturbance within the working area wherever possible, and restrict the limit of disturbance to the extent feasible.

1.03 SUMMARY OF WORK

- A. The work of this Contract includes all work necessary to produce complete and fully usable green stormwater infrastructure facilities as shown and described in the Contract Documents.
- B. The work of this Contract has a designed service life of 100 years. Because of the great expense involved in detecting, locating, and repairing defects, only the best methods and materials, and the most skilled workers, shall be used in the performance of this work.
- C. The paving work of this Contract has a designed service life of 40 years. All such work shall conform strictly to the requirements of the Philadelphia Streets Department (for work in City Streets) and of the Pennsylvania Department of Transportation (for work in State Highways).
- D. Past experience indicates that inadequate compacting of backfill in water sewer, and stormwater trenches frequently results in premature failure of paving patches. The Contractor will be required to adhere to the specific placement and compaction requirements as directed elsewhere in these Specifications.
- E. Past experience indicates that overcompaction of subgrade in green stormwater infiltration trenches results in failure of infiltration systems. The Contractor will be required to adhere to the

specific excavation of the subgrade preparation and grading as directed elsewhere in these specifications.

- F. The Contractor shall be required to maintain a clean, functional, and safe worksite at all times. Measures indicated herein are considered the minimum acceptable requirements to maintain a responsible worksite, although site-specific conditions may mandate additional measures on any given project. In such cases, the Contractor is required to be amenable and responsive to requests from PWD to increase site management procedures in place.

1.04 REFERENCE STANDARDS

- A. Wherever the Contract Documents (including the Standard specifications of the Department) refer to the standard specifications of technical associations, institutes, or societies, or to standard Federal, State, or City specifications, the reference shall be to the most recent revision or amendment thereof, unless otherwise noted.
- B. Pennsylvania Department of Environmental Protection, “Underground Utility Line Construction – Typical Erosion and Sediment BMPs”, August 1, 2001 or as revised.
- C. Philadelphia City Code, Title 4: The Philadelphia Building Construction and Occupancy Code.
- D. International Building Code (IBC), Chapter 33 – Safeguards During Construction, 2009 edition or most recently revised.

1.05 PROSECUTION OF WORK

- A. Work under this Contract shall be performed as day work.
- B. In order to complete all the work within the time specified, the Contractor will be required to vigorously prosecute the work without unnecessary delays.
- C.

1.06 ABBREVIATIONS

GSI-----Green Stormwater Infrastructure
PWD-----Philadelphia Water Department

1.07 PHILADELPHIA WATER DEPARTMENT CONTACTS

- A. Robert Rotermund
Chief Engineer, Construction Branch
Philadelphia Water Department
ARAMARK Tower, 2nd Floor
1101 Market St.
Philadelphia, PA 19107
Phone: 215-685-6345
- B. Jessica Brooks
Acting Director, GSI Unit
Philadelphia Water Department
ARAMARK Tower, 4th Floor
1101 Market St.
Philadelphia, PA 19107
Phone: 215-685-6039
- C. Gerald Bright

Manager, GSI Maintenance
Philadelphia Water Department
ARAMARK Tower, 4th Floor
1101 Market St.
Philadelphia, PA 19107
Phone: 215-685-4953

1.08 CONFORMITY WITH PLANS AND SPECIFICATIONS FOR STORMWATER INFRASTRUCTURE

- A. All materials furnished, and all work performed under this Contract, shall be in conformity with the lines, grades, cross sections, dimensions (including tolerances), and material requirements shown on the Drawings or indicated in the Specifications.
- B. PWD will determine the limits of reasonably close conformity in each individual case, and their judgment will be final and conclusive. This judgment will be communicated to the Contractor through Owner.
- C. PWD may find that the materials, or the finished work in which they are used, are not within reasonably close conformity with the Contract Documents, and have resulted in inferior or unsatisfactory work. In this event, the work or materials shall be removed and replaced, or otherwise corrected by the Contractor, without cost. This direction to be provided by Owner.
- D. PWD may find the installation and maintenance of the specified Erosion and Control not within reasonable close conformity with the Contract Documents, and have resulted in inferior or unsatisfactory work. In this event the work or materials shall be removed and replaced, or otherwise corrected by the Contractor, without cost. This direction to be provided by Owner.

1.09 FIELD OFFICE

- A. The Contractor shall furnish and maintain at the site a Field Office for the PWD Inspector having floor areas not less than 120 square feet for Contracts under 120 calendar days and not less than 300 square feet for Contracts equal to or over 120 calendar days. It shall also have heat and light satisfactory to the PWD Inspector. Telephone service, other than the "pay station" type, shall be provided for the exclusive use of the PWD Inspector. It may be either a trailer-type office acceptable to the PWD Inspector, or a temporary building. Contractor shall also provide toilet and washing facilities for the exclusive use of the PWD Inspector in Field Offices 300 square feet and larger.
- B. Should it be impossible to schedule the utility hookups prior to the scheduled start of construction, the field office shall then be equipped with a generator for electricity and cellular telephone. Construction work shall not begin until the field office is ready unless authorized in writing by PWD. Any lost time in waiting for the field office to be ready shall be made up by the Contractor in order to meet time constraints specified. In making up the lost time, any extra working hours the City incurs, the Contractor shall reimburse the City for all costs.
- C. The Contractor shall furnish and maintain internet access for the exclusive use of the PWD project manager and PWD Inspector. Internet access can be wireless type (3G/4G mobile hot spot), or wired type (Cable, DSL, Fiber optic).
 - 1. Where wireless internet type is provided, the wireless internet must be provided and maintained for the duration of the contract. Mobile hotspot devices and service shall be provided which must allow for multiple devices to connect to and use the wireless internet

simultaneously. Laptops, phones, tablets and any other electronic device with the ability to connect to the internet must be able to connect to the mobile hotspot. The internet speed for the mobile hotspot device must be compatible with 3G network speeds with the ability to function on 4G network speeds when available. The devices download speed must be capable of at least 3Mbps (megabits/second) and shall be compatible with both Windows operating system and Mac operating system. The Contractor shall provide all necessary hardware and maintain the service contract for the duration of the project.

2. Where construction trailers are not required by the contract, the Contractor shall provide an alternative power source connection (12V car type power) in addition to the standard AC power supply.
3. The following mobile hotspot devices are available through the following carriers who meet the minimum specifications state above:
 - a. Verizon Jetpack™ 4G LTE Mobile Hotspot MiFi® 4510L
 - b. AT&T Mobile Hotspot Elevate 4G
 - c. Sprint Express™ Mobile Hotspot
 - d. T-Mobile® Sonic 4G Mobile Hotspot
 - e. Or an approved equal
4. Where wired internet is provided, the wired internet must be provided and maintained for the duration of the contract. Wired connection shall be equipped with a router with a minimum of 4 open LAN ports. If a construction trailer is not required by the contract, Contractor shall provide the wireless internet type detailed above. Acceptable providers for wired internet access are:
 - a. Verizon Fios
 - b. Verizon DSL
 - c. Comcast Cable modem
 - d. Or an approved equal

1.10 PRE QUALIFICATIONS OF SUPPLIERS

- A. Suppliers of materials must be pre-qualified in accordance with Water Department Quality Certification Standards QC-1 for Precast Concrete Products, QC-2 for Gray / Ductile Iron Castings, QC-3 for Ready-Mixed Concrete, QC-4 for Welded Steel Inlet Frames and Grates, QC-5 for Standard Pressure Fire Hydrants, QC-6 for Reinforced Concrete Pipe, QC-7 for Filter Media Products, QC-8 for Ductile Iron Pipe and Fittings, QC-9 for Vitrified Clay Pipe and Fittings, QC-10 for Standard Pressure Gate valves (3” to 12”) & (16” & Larger), QC-11 for Standard Pressure Butterfly Valves (3” to 20”) & (24” & Larger), QC-12 for Resilient- Seated Gates Valves (3” to 12” Dia. & 16” Dia. to 48”), and QC-13 for Thermoplastic Pipe and Fittings.
- B. Prospective bidders may determine the status of suppliers of covered items by contacting the Quality Certification Staff, Central Laboratory Facility, Materials Engineering Laboratory, 1500 E. Hunting Park Avenue, Phila., PA 19124, phone (215) 685-1447.

1.11 INSPECTION

- A. Contractor is placed on notice that Owner has committed to providing PWD an invitation with two (2) weeks' notice and able to attend all construction meetings and that this will need to be taken into account in scheduling such meetings. These meetings are to include, but are not limited to:
 - 1. Preconstruction Meetings
 - 2. Mobilization Meetings
 - 3. Construction Progress Meetings
 - 4. Final Project Walkthroughs
- B. Contractor shall notify PWD to inspect construction after the completion of critical milestones as listed below. Contractor shall not proceed with stormwater infrastructure construction until approved by PWD. At least 48 hours' notice is to be provided for all activities listed below, unless a greater period of notice is required by the relevant specifications.
 - 1. Completion of site preparation, E&S controls, and tree protection
 - 2. Completion of excavation and preparation of sub-grade, including
 - 3. Double ring infiltrometer testing
 - 4. Placement of geotextiles and impermeable liners (geomembranes)
 - 5. Placement of sand, stone, and modular storage
 - 6. Placement of inlet, piping, and drainage structure construction
 - 7. Video inspection of piping and modular storage systems
 - 8. Connections to sewers and existing PWD infrastructure

1.12 PHOTOGRAPHIC DOCUMENTATION

- A. Contractor shall provide PWD with photo-documentation of construction activities for stormwater infrastructure.
- B. Sufficient photographs should be provided to document the progress of stormwater infrastructure construction. Contractor shall take photos to document the inspection milestones outlined in Part 1.07B.
- C. Contractor shall furnish JPEG files for viewing and printing of each photograph with notes to PWD.

1.13 SUBMITTALS

- A. Summary
 - 1. The requirements of this section shall apply to all Contractor submittals required as part of this Contract. The Contractor is directed to the individual specification sections for the detailed technical requirements for each submittal.
 - 2. It is of utmost importance that the work of this Contract be carefully planned and coordinated to ensure that the work is accomplished efficiently without unnecessary delays. The Contractor's submittals shall be complete and submitted sufficiently in advance of each element of work so as to prevent unnecessary delays.

3. Submittals shall be submitted to Project Administrator for forwarding to Owner, Landscape Architect, Engineer, PWD reviewer, and other project professionals.

a. Addresses

- A. Mike Schramm
Chief Engineer, Construction Branch
Philadelphia Water Department
Jefferson Tower, 2nd Floor
1101 Market St.
Philadelphia, PA. 19107
Phone: 215-685-6350

- B. Vahe Hovsepian
Manager, Design Branch
Philadelphia Water Department
Jefferson Tower, 2nd Floor
1101 Market St.
Philadelphia, PA. 19107
Phone: 215-685-6278

- C. Jessica Brooks
Director, GSI Implementation Unit
Philadelphia Water Department
Jefferson Tower, 4th Floor
1101 Market St.
Philadelphia, PA 19107
Phone: 215-685-6039

- D. Trisha Grace
Manager, Projects Control Unit
Philadelphia Water Department
Jefferson Tower, 2nd Floor
1101 Market St.
Philadelphia, PA. 19107
Phone: 215-685-6336

- E. Benjamin Jewell
Chief Water Transport Engineer, Collector Systems
3201 Fox Street
Philadelphia, PA 19129
Phone: 215-685-4908

- F. Gerald Bright
Manager, Green Stormwater Operations
Philadelphia Water Department
Jefferson Tower, 4th Floor
1101 Market St.
Philadelphia, PA 19107

Phone: 215-685-4953

G. William Roscioli
Materials Engineering Laboratory
Bureau Laboratory Services (BLS)
Philadelphia Water Department
1500 E. Hunting Park Avenue
Philadelphia, PA 19124
Phone: 215-685-1447

H. Altje Macy, PE
Civil Engineer
Meliora Design
259 Morgan St
Phoenixville, PA 19460
Phone: 484-467-5743

I. Sara Pevaroff Schuh, RLA
Landscape Architect
SALT Design Studio
161 Leverington Avenue Suite 1005
Philadelphia, PA 19127
Phone: 215-621-7600

J. Address all submittals to Chief of Construction Branch unless otherwise directed.

4. From time to time and, at its sole election, Owner may elect to have Contractor send submissions to reviewers. In the case of PWD, any direct submission shall be provided to the addresses listed above unless the Project Administrator provides alternative guidance for PWD approved electronic submission. Address all submittals to Chief of Construction Branch unless otherwise directed.

B. Pre-Construction Submittals for Stormwater Infrastructure

1. Schedule of Operations:

- a. Within fourteen (14) calendar days of issuance of the Notice to Proceed, Contractor shall prepare and submit, in addition to such copies as may be required for Owner and other project professionals, five (5) copies of the proposed Schedule of Operations to the Project Administrator for forwarding to PWD.
- b. The Schedule of Operation must show the proposed method of prosecuting the work of this contract including the dates upon which the principal activities are planned to start and finish.
- c. Any updates to the schedule will require a submission of no less than five (5) copies to PWD.

2. Lists of Suppliers and Subcontractors: Before starting work, Owner will submit to the Chief of Construction Branch (with a copy to the GSI Unit) the following lists as reflected in the Contractor's bid. Contractor shall provide Project Administrator with timely notice of any changes in such lists so that updates can be submitted to PWD.

- a. The suppliers of materials to be used for this Contract.
 - b. The subcontractors to be used for this Contract.
- C. Shop Drawings and Samples for Stormwater Infrastructure
1. The Contract Documents cover the general design, construction, and arrangement, and certain details, but they do not purport to cover all details involved in the performance of the work.
 2. Owner will submit for approval to PWD, copying the Contractor, complete Shop Drawings for each element of the work under each Contract.
 - a. Shop Drawings are generally defined as all Drawings, diagrams, illustrations, brochures, schedules, bills of material, performance charts, instructions, and other data which illustrate the manufacture, fabrication, construction, and/or installation of the work or any part of the work, and which are submitted to PWD by Owner to establish that the materials, articles, and pieces of equipment proposed to be supplied will, when installed, meet all contract requirements.
 - b. The Shop Drawings shall show all dimensions, and all types of materials used, and shall identify each piece of equipment proposed to be installed.
 - c. Shop drawings must be clearly dated with the date referring to the revision date of the specific detail or drawing as depicted in the submission.
 3. Samples are physical examples which illustrate materials, equipment, or workmanship, and establish standards by which the work will be judged. Submit Samples where required.
 4. Submit 6 copies of each Shop Drawing, in addition to copies required for Owner and its project professionals, to Project Administrator for submission to PWD for review (or electronic copy as specified herein).
 - a. After review, three (3) copies of each Shop Drawing will be returned to Owner to return to the Contractor.
 - b. Revise each Shop Drawing as required, and resubmit to PWD.
 - c. If no further revisions are required, three (3) "Approved" copies of each Shop Drawing will be returned to Owner to return to the Contractor.
 5. Transmittal Letters:
 - a. Each submission of Shop Drawings shall be accompanied by a Transmittal Letter listing each Shop Drawing submitted, its submittal number, whether it is a resubmission, and the number of the applicable proposal item(s).
 - b. The Transmittal Letter shall also clearly state any deviations from the contract requirements, and any change from prior submissions other than those required by PWD's comments. Address each Transmittal Letter to Owner who will send a copy of each Transmittal Letter to the Construction Division Chief.
 6. Do not fabricate any work, order any equipment or materials, or perform any construction prior to approval by PWD and Owner of all applicable Shop Drawings and Samples. It is strongly suggested that the Contractor provide shop drawings at or before the preconstruction meeting for PWD and Owner review and approval.

7. PWD's approval of Shop Drawings will not relieve the Contractor's responsibility to fulfill all contract requirements. Changes to the contract requirements may only be made by written Change Order to Owner in accordance with Contract Documents Contractor is placed on notice that any change orders or change directives for stormwater infrastructure elements will be coordinated by Owner with PWD and that Owner will issue change directives and change orders for such elements upon the request of PWD in accordance with the Standard Contract Requirements.
 8. Upon prior approval from PWD, submissions of shop drawings may be made electronically at Owner's discretion.
 - a. All electronic submissions shall include a transmittal letter as specified above, and shall be sent to Owner for submission to PWD for review by the method agreed upon in the approval for electronic submission. Copies of the transmittal letter (or full electronic submission, if preferred) shall be sent to PWD Construction by Owner
 - b. Website links, FTP site links, or other secondary-access methods of receiving the information are not considered acceptable; all source materials shall be included in the submission.
 - c. Electronic submissions may include, but are not limited to, electronic mail attachments, compact disc data recordings, or removable flash memory device use.
 - d. PWD does not assume responsibility for receipt of electronic submissions (especially electronic mail) until such time as confirmation of receipt has been sent to Owner.
 9. Approved versions of all shop drawings shall be included in the Operations and Maintenance Manual for the project as specified herein.
- D. Substitutions – Any product substitutions for stormwater infrastructure proposed by the Contractor shall require shop drawing review by PWD. As appropriate, the shop drawing submittal shall also include any manufacturer recommendations for installation, maintenance, related or appurtenant products or materials, or any other variances from the specified standard. Substitutions must be submitted before starting construction.

1.14 SPECIAL SITE-SPECIFIC CONDITIONS

- A. Any Work in the cartway of State Routes is subject to additional temporary paving and PennDOT inspection requirements. Please see Sections 01570 and 02500 for details.

1.15 PROJECT RECORD AS BUILT DRAWINGS FOR STORMWATER INFRASTRUCTURE

- A. The Contractor shall be responsible for producing As-Built GSI Drawings of all green stormwater infrastructure installed under this Contract following all requirements defined in the Green Stormwater Infrastructure As-Built Survey and Drafting Manual (GSI As-Built Manual).
- B. As-Built drawings shall be reviewed and approved by PWD.
- C. GSI As-Built Manual and supplemental materials can be accessed at the PWD Projects Control office (1101 Market St, 2nd Floor) or online at:
<http://www.phila.gov/water/aboutus/buswithpwd/Pages/contractor.aspx>
- D. Any other infrastructure (water, sewer, streets, etc.) installed shall be verified by the responsible Department or Owner, except as herein specified.

- E. As the work progresses, each Contractor shall keep a complete and accurate record of all changes or deviations from the Contract Documents and the Shop Drawings, indicating the work as actually installed. The Contractor is cautioned to note that required survey elevations may need to be taken at various times during construction operations; survey completed only after final surface restoration shall be inadequate to produce the elevations described in the GSI As-Built Manual.
- F. Contractor shall submit as-built survey elevations at the completion of each inspection milestone outlined in Part 1.07B.
- G. Within 15 calendar days from substantial completion of the work performed of any Contract, that Contractor shall deliver to PWD for approval one hard copy and one electronic copy of these documents as defined in the GSI As-Built Manual and herein. Features not accurately represented on the As-Built Drawings will not be considered substantially complete as the As-Built information is considered integral to the work performed.
- H. At any time when the work is complete, the Contractor is encouraged to submit As-Built Drawings for each site.
- I. After making any corrections required by PWD, the Contractor shall submit to Construction Branch two complete final sets of Record Drawings (hard copy and electronic copy) as described above for distribution: (one (1) set to GSI Implementation Program; one (1) set to GSI Maintenance).
- J. Final payment will not be made on any Contract until the required record sets have been reviewed and approved by PWD.
- K. No review or receipt of such documents by PWD shall be a waiver of any deviation from the Contract Documents or the Shop Drawings, or in any way relieve any Contractor from the responsibility to perform the work in accordance with the Contract Documents and the approved shop drawings.
- L. No review or receipt of documents by PWD shall be a waiver of any deviation from the Contract Documents or the Shop Drawings, or in any way relieve any Contractor from the responsibility to perform the work in accordance with the Contract Documents and the approved shop drawings.

1.16 MEASUREMENT AND PAYMENT

- A. All work necessary to meet the requirements defined in the GSI As-Built Manual shall be paid for under the lump sum bid price for PWD GSI As-Built Drawings. The price bid shall include the following and all appurtenant work and materials: continuous vertical surveying, documentation of completed work, technical drafting, submission of as-built package and all revisions necessary to comply with the Manual.
- B. All Contractor pay applications shall be submitted to the Project Administrator with all required substantiation as required by the Contract Documents. In addition to pay application review requirements as otherwise provided in Contract Documents, all pay applications including stormwater infrastructure components costs will be submitted by Owner to PWD for review and approval prior to approval and payment by Owner. Once the item is approved by PWD, PWD will communicate this decision to Owner who will approve payment for that element.
- C. Contractor is required to include the following items with the payment application:
 1. Approved As-Built Drawings for Stormwater Infrastructure per Part 1.10.

2. Soil and double ring infiltrometer test reports. See Section 02732 Soil Properties Investigation for details.
3. Copies of construction photographic documentation per Part 1.07.
4. Any and all spare parts as required by the specifications

D. Change orders for stormwater infrastructure work must be reviewed and approved by PWD.

PART 2	PRODUCTS	Not Used
PART 3	EXECUTION	Not Used

END OF SECTION

SECTION 00850
DRAWINGS AND SCHEDULES

PART 1 GENERAL

1.01 CONTRACT DRAWINGS

- A. The following Plans illustrate the Work under this Contract, and are an integral part thereof.
- B. Green Stormwater Infrastructure Plans:

- T-1 OF 12 – INDEX SHEET
- G-1 of 12 - STORMWATER AND GRADING PLAN
- G-2 of 12 - STORMWATER PROFILES – SHEET 1
- G-3 of 12 - STORMWATER PROFILES – SHEET 2
- G-4 of 12 - STORMWATER PROFILES – SHEET 3
- G-5 of 12 - STORMWATER PROFILES – SHEET 4
- G-6 of 12 - STORMWATER DETAILS – SHEET 1
- G-7 of 12 - STORMWATER DETAILS – SHEET 2
- G-8 of 12 - STORMWATER DETAILS – SHEET 3
- G-9 of 12 - STORMWATER NOTES
- DA-1 of 12 – DRAINAGE AREA MAP – SHEET 1
- DA-2 of 12 – DRAINAGE AREA MAP – SHEET 2
- L-1 of 12 – LANDSCAPE PLAN
- L-2 of 12 – LANDSCAPE DETAILS

1.02 APPENDICES

1.03 TRAFFIC REQUIREMENTS

- A. The Maintenance of Traffic Requirements are intended to be included in the Contractor's application for roadway occupancy permits. As written, they represent the site-specific special conditions known to require inclusion in the permit applications; they are not guaranteed to be complete or exclusive in any way. The Contractor is required to follow any additional traffic maintenance requirements dictated by the permitting authority.

1.04 SOIL BORINGS

- A. The borings shown on Boring Sheets are for the information of the City; their correctness is not guaranteed by the City, and in no event, is this information to be considered as part of the Contract. If this information is used by a bidder in preparing his proposal, they must assume all risks resulting from conditions differing from the approximation shown.
- B. Test Boring Logs are **not** a part of this Contract. The City assumes no responsibility for the correctness, completeness, or accuracy of the Test Boring Logs. Test Boring Logs may be

available, for the Contractor's information only, upon request in writing to PWD Design Branch, 2nd Floor, Aramark Tower 1101 Market Street, 19107.

Geotechnical Testing Results Report by Duffield Associates on November 3, 2020.

- C. If bidders desire to obtain their own such data, the City will afford them the opportunity, at their own expense, to make borings, soundings, or dig test pits on the site of the work. Before making any excavations whatsoever, borings or sounds, driving test piles, or digging test pits on the site of the proposed work, the Contractor shall check the records of the Committee of Highway Supervisors, Room 860, Municipal Services Building, and pursuant to the requirements of Pennsylvania Act 172 (1986), the Contractor shall contact the Pennsylvania One-Call System at 1-800-242-1776 for any City, public utility, or privately owned structures that may be so disturbed, and notify the owners of such structures seventy-two (72) hours in advance of starting work.

1.05 RECORD PLANS

- A. In an effort to provide bidders on contracts with the opportunity to make informed decisions concerning existing conditions, return plans are available for review at the Water Main Records Unit, 2nd Flr., Jefferson Tower, 1101 Market Street, Philadelphia, PA 19107-2994. These plans are not guaranteed to be correct. Any conclusions or assumptions a bidder may make based on the contents or existence of these plans are at the bidder's own risk.
- B. Following is a list of return plans available during the design of this project and are available for review:

Water:

- Plates: w-065
- As-Builts: 148516, 148517, 148518, 151665, 151666, 151667, 179227, 230170, 230171, 230172, 230173, 230389, 283001

1.06 APPROVED ADA-COMPLIANT RAMP DESIGNS

- A. The designs show no ADA compliant ramp designs. The Contractor shall be solely responsible for design of any additional ramp construction attributable to means or methods of construction practice.

PART 2	PRODUCTS	Not Used
PART 3	EXECUTION	Not Used

END OF SECTION

SECTION 01121

PRECAUTIONARY MEASURES

PART 1 GENERAL

1.01 EXISTING UNDERGROUND UTILITIES

- A. Attention is directed to the existing underground structures adjacent to, parallel with, or over trenches. The Contractor will be held responsible for any damage done to such structures in the prosecution of the work. He shall exercise every precaution necessary to prevent damage in working underneath or adjacent to any underground structure. Any damage done to such structures shall be repaired by the Contractor. There will be no additional compensation for any work and materials necessary for protecting, supporting, or repairing active underground structures, or for removing abandoned structures (if any), as such costs are included in the prices bid under this Contract.
- B. The Contractor shall obtain from the appropriate utility company or City Department, verification of the current status of structures shown on the Plans as abandoned, before working near such structures.
- C. The underground structures shown on the Plans are plotted from record information, and are not guaranteed to be complete and correct as to location, size, and depth. The Contractor shall obtain all necessary information on existing underground structures by digging test holes. There will be no separate or additional payment for this work.
- D. If interference develops that is not otherwise provided for in the Contract Documents, the Contractor shall notify the utility company involved and make arrangements to overcome the interference to satisfaction of PWD, without additional cost to the City.
- E. In the event that some portion of the Work of the Contract is outside of the public right-of-way, the Contractor shall engage a utility locator service to identify and mark the existing utilities within the limits of disturbance. The Contractor shall be responsible for coordination with any affected utilities, and any resultant changes to the Work shall require approval by PWD. No additional payment shall be made for the engagement of the utility locator service as necessary.

1.02 NOTIFICATION OF UTILITIES

- A. Pursuant to the requirements of PA Act 287 (December 10, 1974), as amended, of the Legislature of the Commonwealth of Pennsylvania, titled "Underground Utilities Line Protection Law", the Contractor shall call each utility company and City Department that follows, three days before beginning excavation.
 - 1. PECO Energy.....PA One Call System.....1-800-242-1776
 - 2. PGWPA One Call System.....1-800-242-1776
 - 3. Philadelphia Parks and Recreation Department.....(215) 685-3635, 683-3679
 - 4. SEPTA.(215) 580-4000
 - 5. Drainage Information Unit(215) 685-6271, 6272
 - 6. Water Main Information(215) 685-6273, 6274, 6275
 - 7. Traffic Engineering (Signals)..... (215) 686-5572, 685-1206
 - 8. Verizon.....PA One Call System..... 1-800-242-1776

- 9. Street Lighting Section..... (215) 686-5515
- 10. Communications Service Section..... (215) 686-3951
(Division of Technology, Electrical Bureau)
- 11. Cable Companies.....PA One Call System.....1-800-242-1776
(Comcast, Greater Media, and Wade Communications)
- 12. Veolia Energy Philadelphia, Inc. Pa One Call System.....1-800-242-1776

- B. The Contractor shall notify the appropriate utility company or City Department three days before working in the vicinity of underground structures which the Plans show in close proximity to the work, and shall fully cooperate with the company or Department involved.

1.03 HYDRO-HAMMER PROHIBITED

- A. The use of a Hydro-Hammer or similar equipment for removal of existing paving on this project is hereby prohibited. Such equipment is prohibited because of the great possibility of damage to existing underground structures (e.g., water and gas mains, services, and laterals), and also to the probability of excessive breakage of adjacent existing paving.

1.04 PECO ENERGY FACILITIES

- A. Rearrangement of PECO Energy aerial facilities requires a four week notice and payment in advance. There will be no separate or additional payment for this work.
- B. Attention is directed to the existing underground PECO Energy facilities above or near the proposed trenches in various locations. These facilities shall be protected and supported by the Contractor during construction. If any PECO facilities not shown on the Drawings are uncovered as a result of construction activities, they shall also be protected and supported by the Contractor.
- C. Excavation near utility poles supporting PECO Energy facilities shall require that the Contractor contact PECO and request that a PECO representative evaluate the need for pole protection.

1.05 PROVISIONS FOR EXCAVATING NEAR PECO ENERGY ENERGIZED UNDERGROUND TRANSMISSION LINES.

- A. At least 10 days before the beginning of any excavation, the Contractor shall contact the Supervising Engineer, Underground Transmission, at PECO Energy Oregon Shops, 2610 S. Columbus Blvd., Philadelphia, PA 19148, (215) 731-3254. At that time, the Contractor's work schedule will be reviewed to determine inspection requirements and precautionary measures required.
- B. Three days before any excavation begins, the Contractor shall call the PA One-Call system, 1-800-242-1776, and specify the location where excavation work will be done. This call will result in the location of PECO Energy facilities being marked.
- C. A PECO Energy representative will inspect the job site periodically and will be available as required by calling (215) 731-3254. Presence of this representative or any other PECO representative at the job site does not relieve the Contractor of any responsibility involving injury to workmen or the public, or damage to any underground transmission facilities, including the pipe and its coating and the Contractor's equipment.
- D. Excavation near utility poles supporting PECO Energy facilities shall require that the Contractor contact PECO and request that a PECO representative evaluate the need for pole protection.

- E. Excavation in the vicinity of the underground transmission line will be performed as follows:
 - 1. Large equipment (i.e., scrapers, bulldozers, etc.) may be used to excavate in the vicinity of the underground pipe line up to but not closer than 4 feet from the marked center line.
 - 2. Small equipment (i.e., backhoe, etc.) may be used to excavate in the vicinity of the underground pipe line up to but not closer than 2 feet from the marked center line.
 - 3. Hand excavation shall be used to remove the remaining material and uncover the underground pipe line.
- F. The Contractor shall take care not to damage any transmission facilities, including the coating of the pipe during excavation. Any damage is to be reported promptly to PECO Energy. The PECO Energy representative will decide whether repairs are required. All repairs shall be made according to PECO Energy specification S-7512.
- G. Before excavation begins, the Contractor shall present for PECO Energy review and approval a plan showing how the pipe is to be supported, where it will be undercut, and how the pipe will be protected from damage by equipment while uncovered.
- H. After excavation is complete and at least five days before any backfilling operation is to commence, the Contractor shall notify the Supervising Engineer, Underground Transmission. At that time, the pipe coating shall be tested in the presence of a PECO Energy representative to assure the integrity of the coating. This testing shall be conducted according to PECO Energy specification S-7512. All necessary repairs will be made to the pipe coating prior to backfilling.
- I. At no time shall equipment of any kind run over any exposed transmission facility or pipe without appropriate protection.
- J. The Contractor shall backfill the area around the pipe from 12 inches below the pipe with corrective backfill described in PECO Energy specification 148-P-7 (for thermal sand) or 148-P-8 (for fluidized thermal backfill). Backfill shall extend to a minimum of 12 inches above the top of the pipe. Choice of backfill shall be discussed with the Supervising Engineer, Underground Transmission. Backfill shall be installed as described in the specification. Care shall be taken to prevent damage to the coating during the backfill operation.
- K. In the event that an underground transmission line is exposed, then the Contractor will be responsible for all cost for any of the following required work:
 - 1. Testing of the somastic coating on the transmission pipe line to insure its integrity.
 - 2. Repair of any damage to the somastic coating.
 - 3. Backfilling the area around the transmission pipe with corrective backfill.

This work shall meet requirements contained in the PECO Energy written standards and specifications.

- L. Information concerning PECO Energy tests, standards or specifications, can be obtained from the Supervising Engineer, Underground Transmission Section.

1.06 PGW FACILITIES

- A. Attention is directed to the existing gas mains above or near the trenches in various locations. These gas mains will be abandoned as necessary, and new mains laid as necessary, by the Philadelphia Gas Works. The Contractor shall make all necessary arrangements with the Gas

Works, and shall fully cooperate with them in connection with their structures. The Contractor shall notify the Philadelphia Gas Works three days before beginning work.

- B. PGW cautions all contractors to use care when performing work near PGW facilities. When making perpendicular crossings under PGW facilities, it is recommended that the stipulations of PGW's GS 40.7 & 53.8 be followed where practical so that the unnecessary disturbance of PGW structures is avoided.

1.07 PROVISIONS FOR PASSING UNDER EXISTING PGW FACILITY

- A. Installations crossing under 6 inch and smaller gas pipes shall be punched or bored.
- B. Installations crossing under 8 inch and larger gas pipes shall be accomplished by boring a hole no larger than the diameter of the conduit, water service or sewer lateral.
- C. The intended conduit or lateral bored shall have a minimum clearance of 1'0" from the bottom of the gas main to the top of the conduit or lateral pipe.
- D. The distance from the trench wall of the boring operation to the marked center line of the gas pipe shall be at least equal to the distance from the top of the gas pipe to the bottom of intended conduit or lateral bored as shown in PGW Distribution Standards, Drawing No. GS 40.8.
- E. A copy of PGW standard drawing No. GS 40.8 can be obtained from PGW Distribution Department, 800 W. Montgomery Avenue, Philadelphia, PA (215-684-6664).
- F. All voids between the conduit, water service or sewer lateral pipe and the punched or bored opening shall be filled with grout.
- G. The Contractor shall determine the actual location and depth of the gas pipe.
- H. Test openings to determine depth of gas pipe shall be as small as possible. Any excavation immediately above the pipe and within 18 inches of the outside edge of the structure must be performed using prudent techniques. This can only be done with the use of hand tools or vacuum excavation. Any damage to PGW facilities including coating damage must be reported immediately. Repairs will be made at the expense of the Contractor.
- I. Backfilling and paving restoration of test openings will be at the expense of the Contractor.
- J. If foreign structures come within 6 inches of PGW gas facilities, an insulating spacer must be installed per D.S. 23.3.
- K. PGW shall be given a minimum of three days notice to start of test openings or installation of water main, water services, sewer pipe, or sewer laterals. Call 800-242-1776.

1.08 VERIZON FACILITIES

- A. Attention is directed to the existing Verizon structures, ductbanks, and crossings above or near the trenches in various locations. The contractor must locate all facilities in the field relevant to the work and the facilities should be maintained in-place and not disturbed.
- B. The Contractor is responsible to support, protect and maintain all Verizon structures, in place, undisturbed.
- C. Any/all Verizon trenches disturbed shall be returned to original condition or better.
- D. The Contractor is financially responsible if any damage occurs and Verizon is required to repair, adjust, relocate, etc. any underground structures. Financial responsibility will include, but is not limited to, customer service interruptions.

E. If any work is required by Verizon, Verizon will need thirty days notice prior to beginning any work.

1.09 SEPTA

A. SEPTA does not have any underground facilities within the project area.

B. For construction along E Olney Ave were a bus route is present, a 15-foot travel lane is required to be maintained at all times during construction. All bus stops are to be maintained and open for passengers during construction. If these conditions cannot be met, SEPTA requires a 2-week notice so that detours or alternate stops can be arranged.

C. SITE-SPECIFIC CONCERNS (IF APPLICABLE)

PART 2 PRODUCTS Not Used

PART 3 EXECUTION Not Used

END OF SECTION

SECTION 01125
CONTRACTOR REQUIREMENTS FOR
CONFINED SPACE ENTRY

PART 1 GENERAL

1.01 SCOPE AND PURPOSE

- A. This Section applies to all personnel on Water Department job sites where confined space entry occurs.
- B. The purpose of this Section is to ensure that Contractor's workers are safeguarded from unsafe atmospheres while entering or occupying any confined space.

1.02 DEFINITIONS

- A. Confined Space: is any space that has limited or restricted means of access to a space not intended for continuous occupancy, and that could contain a hazardous atmosphere.
- B. Hazardous Atmosphere: is any atmosphere that has one or more of the following characteristics:
 - 1. is a toxic atmosphere;
 - 2. is oxygen-deficient or oxygen-enriched;
 - 3. is an explosive atmosphere.
- C. Toxic Atmosphere: is any atmosphere in which the concentration of any airborne contaminant exceeds the OSHA Permissible Exposure Limit (PEL) or the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV) established for the contaminant.
- D. Oxygen-Deficient Atmosphere: is any atmosphere having less than 19.5% oxygen content.
- E. Oxygen-Enriched Atmosphere: is any atmosphere having greater than 22% oxygen content.
- F. Explosive Atmosphere: is any atmosphere that contains a concentration of flammable or combustible material in excess of 10% of its Lower Flammable Limit (LFL, also called LEL).
- G. Confined spaces may include, but are not limited to, storage or processing tanks (either above or below grade), manholes, sewers, conduits or tunnels, wet pits, ducts, and open-topped spaces more than 4 feet deep.

1.03 APPLICABLE STANDARDS OF CONFORMANCE

- A. Contractor whose employees may enter confined space shall comply with the following regulations:
 - 1. Applicable sections of 29 CFR PART 1926 (OSHA Construction Industry Regulations and Standards).
 - 2. Commonwealth of Pennsylvania regulations.
- B. Unless the above regulations impose more stringent requirements, the requirements set forth in Section 27 ("Work in Confined Spaces") of the U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1 (Rev. 1992) shall apply.

1.04 RESPONSIBILITIES

A. City of Philadelphia Responsibilities:

1. The City of Philadelphia will, wherever applicable, supply contractors with material safety data sheets (MSDSs) as follows:
 - a. Gases known to be generated from wastewater, namely, hydrogen sulfide (H₂S) and methane.
 - b. Chemicals presently known to be significant potential contaminants of wastewater from major point-source industrial discharges.
 - c. Chemicals used in City of Philadelphia treatment plants to treat fresh water and wastewater.

B. Contractor Responsibilities:

1. The Contractor shall be solely responsible for complying with applicable standards of conformance, including, but not limited to, the following:
 - a. Establish written procedures for confined space entry that includes entry permit requirements.
 - b. Ensure that all affected personnel are properly trained in all aspects that may affect their safety during confined space entry.
 - c. Ensure that affected employees are provided information and training concerning potentially hazardous atmospheres.
 - d. Provide all necessary instruments and equipment needed for complying with established procedures, including (but not limited to):
 1. Testing of atmosphere with direct-reading instruments;
 2. Personal protective equipment;
 3. Non-entry retrieval devices such as body harnesses and winches;
 4. Communications devices such as two-way radios;
 5. Positive ventilation equipment (e.g., blowers and flexible ducts).
 6. The Contractor shall be solely responsible for interpreting hazard information provided by the City of Philadelphia and for providing training and information to employees in accordance with the requirements of 29 CFR PART 1926. (OSHA Hazard Communication Standard).
 7. Properly executed permits shall be completed by the Contractor before any contractor employee or subcontractor either:
 8. Performs hot work in an area defined by the City as a hot-work permit area.
 9. Enters any space determined by the City to be a permit-required confined space.

1.05 ENFORCEMENT

- A. Performance may be audited by the job-site representative of the City of Philadelphia Water Department. The representative may, at his discretion, obtain advice from technical specialists. However, the City is under no contractual obligation to perform such functions.

- B. Failure of the Contractor to conform to applicable safety standards or to meet his responsibilities, whether or not explicitly covered in this section, may cause the job-site representative either to prevent work from starting or to stop work in progress.
- C. Repeated or egregious failures on the part of the Contractor to comply with any requirement of the Section may result in termination of the Contract and/or affect the Contractor's eligibility to bid on future contracts. The City of Philadelphia bears no liability for loses, either direct or incidental, suffered by the Contractor in such cases.

PART 2	PRODUCTS	Not Used
PART 3	EXECUTION	Not Used

END OF SECTION

SECTION 01570
TRAFFIC REGULATION

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. It is the Contractor's responsibility to make himself thoroughly familiar with the most recent revisions or amendment to the Pennsylvania Department of Transportation (PennDOT) standard specifications for the maintenance and protection of traffic during construction including the following:
 - 1. Publication 212, Regulations -- Traffic Signs, Signals and Markings (67 PA Code, Chapter 212).
 - 2. Publication 213, Work Zone Traffic Control (67 PA Code, Chapter 211).
 - 3. Publication 408, Specifications (as revised).
- B. Conform fully to above standard specifications. Meet all requirements for providing, placing, maintaining, and removing all necessary pavement markings, warning devices, signs, and barricades.

1.02 RELATED SECTIONS

- A. Section 02400 Project Signage

1.03 SUBMITTALS

- A. Notify the Philadelphia Streets Department, District Highway Engineer, ten (10) days prior to starting work, and five (5) days prior to completing work on this project. Notification shall include Bid Number; Work Number, and expected start date.
- B. For all street closure permits under this Contract, submit application for street closure to Right-of-Way Unit no later than ten (10) days prior to the start of work. Faxes and paper applications are no longer accepted for utility work, and must be applied for at: <http://www.philadelphiastreet.com/highways/street-closure-permits>.
- C. Between the period November 1st and April 1st, the Contractor shall notify the District Highway Engineer of any steel plates used to cover excavations made in snow emergency routes.
- D. Plans and approved permits for the traffic management and pedestrian safety plans submitted by the Contractor to the Streets Department shall also be provided to PWD prior to starting work.

1.04 SPECIAL REQUIREMENTS FOR STATE ROUTES

- A. The Contractor will provide PennDOT District with 15 days notice prior to work in a State Route when the permit identifies that the permitted work will be inspected on a more than spot inspection basis, unless otherwise specified in the permit. This is to co-ordinate a PennDOT inspector. If only point inspection is specified by PennDOT, 3 days notice is required.
- B. For work in State Routes, special temporary paving regulations shall be in effect. At the end of the construction work day, the street shall be smooth, even, and drivable. Additionally, the Contractor is responsible for ensuring the street is swept clean to the satisfaction of PWD at the end of each working day.
- C. The Contractor shall note that for work in a State Route, before the start of construction, the Contractor will be required to obtain a highway occupancy permit from PennDOT. E Olney Ave

is PA State Route 4004. For this project, the permit application number is pending, and the permit application fee to be paid to PennDOT (to be determined by PennDOT). This fee is to be included in the lump sum bid for Maintenance and Protection of Traffic.

- D. Inspection fees for Work completed in State Routes shall be paid out of the Allowance Item for PennDOT Inspection Fees. All paving and related work performed in State Routes will be subject to inspection by PennDOT. The Contractor shall note that the PennDOT inspection cost is an estimate and that any additional PennDOT inspection costs or delays incurred due to actions of the Contractor, as determined by PWD, are the sole responsibility of the Contractor.

1.05 MEASUREMENT AND PAYMENT

- A. All traffic regulation work will be paid for at the appropriate lump sum price bid, except as otherwise provided.
- B. The price bid shall include the following and all appurtenant work and materials:
 - 1. Furnishing, placing, maintaining, and removing all necessary pavement markings, warning devices, signs (including detour and temporary no parking signs), and barricades.
 - 2. Furnishing, placing, maintaining, and removing all temporary footway and cartway paving necessary to reestablish safe and efficient traffic in the construction area (except as otherwise provided).
 - 3. Furnishing, placing, maintaining, and removing steel plates for temporary decking over excavations.
 - 4. Removal and disposal of existing paving beyond payment lines for excavation, where necessary for decking; repaving such areas upon completion of work.
 - 5. Fees and associated costs required for obtaining, maintaining, and otherwise supporting any and all permits for roadway occupancy, demolition, and restoration (except as otherwise provided).

PART 2 PRODUCTS

2.01 STEEL PLATES FOR DECKING

- A. Each steel plate used for decking over trenches shall have clearly marked on the center of the plate the following information:

WD

Contractor's Name

- B. Each letter shall be four inches high, in a space four inches wide, and each stroke forming each character shall be 3/4 inch wide. The lettering shall always be clear and legible.
- C. Should the letters be painted, the paint used shall be white, of good quality and durability for painting on steel. The paint lettering shall be promptly repainted should it become obliterated during the contract period.

PART 3 EXECUTION

3.01 TEMPORARY NO PARKING SIGNS

- A. Where traffic requirements specified under this Contract require use of the existing parking lanes to maintain traffic flow at various locations, where full width street restoration is required, and where the proposed trenches are located in existing parking lanes, the Contractor shall post

temporary no parking signs after 6:00 p.m. the night before the start of work at each location. Signs shall indicate the dates and hours that those areas will be closed. Obtain the "Temporary No Parking" signs from the Highway District indicated on the Contract Drawings.

1. 1st Highway District, 48th & Parkside.....(215) 685-0168
2. 2nd Highway District, 11th & Wharton.....(215) 685-1858
3. 3rd Highway District, 990 Spring Garden Street.....(215) 685-3922
4. 4th Highway District, 6249 Wissahickon.....(215) 685-2191
5. 5th Highway District, Whitaker & Luzerne.....(215) 685-9843
6. 6th Highway District, Bustleton & Bowler.....(215) 685-0352

3.02 MAINTAINING TRAFFIC

- A. Provide and maintain egress and ingress to and from the nearest intersecting public street, unless otherwise directed in writing by PWD, for all local traffic which has origin, destination, or service connections, including loop-type, built-up, or Cul-de-Sac areas, within the limits of the Contract.
- B. On streets upon which people are dependent on commuter service, ample provision shall be made for accommodation of passengers.
- C. Provide and maintain approaches for vehicular and pedestrian access to transit stops; residential, business, industrial, and other public and private establishments.
- D. Provide and maintain approaches to and crossings of intersecting streets until base and surface courses and pavements have properly cured.
- E. Traffic signs in operation for guidance and direction of traffic shall remain in place or be removed or relocated, as directed by PWD.
- F. During the prosecution of work under this Contract, the Contractor shall provide for the safe passage of pedestrian traffic around the work area at all times. Provide at least a six foot (6') wide walking lane whenever possible.
- G. Any unrestored surface shall be protected from pedestrian traffic at all times. Any excavation to be left open at the end of a business day and/or as site-specific traffic needs dictate (school opening/closing times, for example) shall be fully protected by fencing or other adequate measure to prevent pedestrian access to the worksite. Any damage or degradation to the Work attributable to insufficient site protection shall be the Contractor's sole responsibility and repairs made at no additional expense to the City.
- H. At the end of each work day, the Contractor will be responsible for leaving the site in an orderly fashion that will permit vehicle access in the event of a medical or fire emergency within the block.
- I. When the Contractor sets up his equipment, he shall make every effort to take up as little space as possible. Parking and travel lanes where work is not being done shall not be obstructed unnecessarily.
- J. Upon completion of work, the Contractor shall reinstall, repair, and/or replace any traffic signs, signals, and poles that were removed or damaged during the prosecution of work to the satisfaction of the Traffic Engineer.

3.03 STEEL PLATE FOR DECKING

- A. The Contractor is reminded that steel decking plate is not permitted for traffic use in State Routes.
- B. During working hours establish and maintain travel lanes using steel plates and flagmen as necessary to allow through traffic. During non-working hours, backfill or deck with steel plates all excavations.
- C. All steel plate shall be adequately secured to the surface to prevent lateral movement avoiding an unsafe condition.
- D. The size of the steel plate shall be large enough to span the opening, be firmly placed to prevent rocking and shall overlap the edges of trenches and openings and be sufficiently ramped to provide smooth riding and safe condition.
- E. Where deflections are more than 3/4", heavier sections of plates or immediate supports shall be installed.
- F. Prior to placing any Steel plating, the contractor shall provide the Right of Way Unit of the Department of Streets inspector with an emergency telephone number in the event any steel plating or decking is dislodged. Upon notice from the city, the contractor shall remove or restore any dislodged steel plating or decking to a safe condition within six hours upon receipt of notice by the city. In the event it becomes necessary for the City to restore or remove any steel plating or decking; the contractor shall reimburse the City for all costs.
- G. The location or any steel plate remaining in the public right of way for more than 72 hours must be reported to the Streets Department as follows:

Time	Location	Phone No.
8:00 AM to 5:00 PM Monday through Friday	Right of Way Unit	715.686.5501
5:00 PM to 8:00 AM Monday through Friday	City Dispatcher	215.686.4514*
5:00 PM Friday to 8:00 AM Monday	City Dispatcher	215.686 4514*

*Request that the dispatcher also notify the Highway Division at 215-686-5621

3.04 STATE ROUTE TEMPORARY PAVING REQUIREMENTS

- A. For work in State Routes special temporary paving regulations shall be in effect. Exposed earth or stone backfill is not acceptable surfacing on any trench at any time. Minimum temporary surface restoration for traffic use is three inches (3") of Superpave Wearing Course, Class PG 64-22 over a minimum of six inches (6") of compacted subbase material PennDOT 2A aggregate. In sections where the trench has been opened but the proposed system/structure has not yet been installed, the Contractor may elect (with the permission through permit of PennDOT) to leave the street closed to traffic. At the end of the construction work day, the street shall be smooth, even, and drivable. Additionally, the Contractor is responsible for ensuring the street is swept clean to the satisfaction of PWD at the end of each working day.

3.05 MAINTENANCE OF TRAFFIC REQUIREMENTS

- A. The Maintenance of Traffic Requirements required under this Contract are affixed to the end of these Contract Specifications, and are an integral part thereof. These requirements are in general conformity with the outlines set forth by the Streets Department. The Traffic Engineer may find it necessary to alter or increase these measures on any particular location. As a minimum, the

Contractor shall incorporate the attached requirements in his proposed traffic measures and submit them to the permits officer to obtain the necessary street occupancy and/or closure permits.

END OF SECTION