# BID DOCUMENTS

for

# OLD ROUTE 22
# CULVERT REPLACEMENT PROJECT

Located in

Bethel Township, Berks County, PA

October 2026

SESI Project #: 036-26-010

Prepared By:

SESI
ENGINEERING
SURVEYING

**BETHEL TOWNSHIP**
**OLD ROUTE 22 CULVERT REPLACEMENT PROJECT**
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# SECTION 001113 – ADVERTISEMENT AND INVITATION TO BID

Sealed proposals will be received electronically via the PennBid Program by Bethel Township, Berks County for the Old Route 22 Culvert Replacement Project until 10:00 a.m. prevailing time on Wednesday, November 11, 2026, at which time the bids will be opened, with the bid results posted on PennBid shortly thereafter.

All bidding documents and specifications are available at no cost on PennBid:
https://pennbid.bonfirehub.com

Each proposal must be accompanied by a bank cashier's check or bid bond (in the required form) for ten percent (10%) of the bid total.

The project includes, but is not limited to, the demolition and removal of an existing culvert pipe and concrete endwalls, the installation of a new 36" SLCPP culvert pipe and associated precast concrete endwalls, minor grading as required, placement of riprap and scour protection, restoration of the roadway, and all other associated work as more fully described in the Construction Drawings.

Questions shall be submitted via the "Public Q&A" feature within PennBid.

Prevailing wage rates and record-keeping procedures established by Pennsylvania Department of Labor & Industry shall apply to the project.

Bethel Township hereby reserves the right, which is understood and agreed to by all bidders, to reject any and all bids and to waive any omissions, errors, mistakes, defects or irregularities in any bid at its sole discretion.

Bethel Township
Robbi L. Greenfield
Chair of the Board of Supervisors

## SECTION 001153 – REQUEST FOR QUALIFICATIONS

(Complete this Questionnaire in Accordance with the Instructions for Bidders)

1. Name of Bidder: _____

2. Address of Main Office: _____

   _____

3. Form of organization (sole proprietorship, partnership, corporation, etc.):

   _____

4. Year organized: _____

5. All affiliated or subsidiary organizations and companies:

   a. _____

   b. _____

   c. _____

   (Attach separate sheet if needed)

6. All organizations and individuals who have a financial interest of or a specified percentage in the company:

   a. _____

   b. _____

   c. _____

   (Attach separate sheet if needed)

7. Any other organization or individual who controls bidding or operation of the organization:

   _____

8. List other work the organization has performed for the Owner.

   a. _____

   b. _____

   c. _____

   d. _____

9. Percentage of Contract Bidder expects to perform using its own labor and equipment: _____%

10. List all projects awarded but which the organization failed to complete. Identify dates, name and address of owner, name and location of project and kind of work and the reasons the project was not completed: _____

_____

_____

_____

_____

11. List all felony convictions, all bidding related offenses and all misdemeanor convictions involving moral turpitude of the organization, its affiliates, its owners holding more than 10% interest, its officers and its administrators, managers and superintendents that will be assigned to the project: _____

_____

_____

_____

_____

12. List any debarments, suspensions and denials of pre-qualification of the organization for any federal, state, local or governmental contracting: _____

_____

_____

_____

_____

13. List any proceedings of an administrative enforcement nature of whatever kind, including environmental, wage and hour, prevailing wage, employment discrimination or other kind of proceeding: _____

_____

_____

_____

_____

14. On separate sheets, please provide the following documentation:

    a. List of major equipment either owned by organization or that will be leased by organization in completing the work of this Contract.

    b. Financial statement for most recent fiscal year.

    c. List of subcontractors Bidder proposes to use in completing the Work of this Contract.

    d. List of current contracts held, and last five (5) contracts completed. Include name of owner, project name, location, and contract amount.

**BIDDER'S VERIFICATION**

I _____ the undersigned, hereby state that I am authorized to make the statements set forth above and verify that said statements are true and correct to the best of my knowledge, information, and belief. The undersigned understands that the statements therein are made subject to the penalties of 18-PA.C.S., Section 4904 relating to unsworn falsification to authorities.

_____ _____

*Date* *Signature*

# SECTION 002113 – INSTRUCTIONS TO BIDDERS

## ARTICLE 1—DEFINED TERMS

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *Issuing Office*—The office from which the Bidding Documents are to be issued, plan holders are to be registered (via Public Bidding Website), and where the bidding procedures are to be administered (Steckbeck Engineering & Surveying, Inc., 279 N. Zinns Mill Road, Suite A, Lebanon, PA 17042).

## ARTICLE 2—BIDDING DOCUMENTS

2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.

2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.

2.03 Owner has established a Public Bidding Website, as indicated in the Advertisement or invitation to bid. Complete sets of the Bidding Documents are available at no cost via PennBid. https://pennbid.bonfirehub.com. Owner requires that Bidder register as a plan holder and obtain a complete set of Bidding Documents from such website. Bidders may rely that sets of Bidding Documents obtained from the Public Bidding Website are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner via the Public Bidding Website.

2.04 *Electronic Documents*

A. When the Bidding Requirements indicate that electronic (digital) copies of the Bidding Documents are available, such documents will be made available to the Bidders as Electronic Documents in the manner specified.

1. Bidding Documents will be provided in Portable Document Format (PDF). It is the intent of the Engineer and Owner that such Electronic Documents are to be exactly representative of the paper copies of the documents. However, because the Owner and Engineer cannot totally control the transmission and receipt of Electronic Documents nor the Contractor's means of reproduction of such documents, the Owner and Engineer cannot and do not guarantee that Electronic Documents and reproductions prepared from those versions are

identical in every manner to the paper copies.

B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents, described in Paragraph 2.04.A above. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.

C. After the Contract is awarded, the Owner may provide or direct the Engineer to provide for the use of the Contractor documents that were developed by Engineer as part of the Project design process, as Electronic Documents in native file formats.

1. Electronic Documents that are available in native file format may include:

a. **.pdf, .dwg, .docx, .xlsx**

2. Release of such documents will be solely for the convenience of the Contractor. No such document is a Contract Document.

3. Unless the Contract Documents explicitly identify that such information will be available to the Successful Bidder (Contractor), nothing herein will create an obligation on the part of the Owner or Engineer to provide or create such information, and the Contractor is not entitled to rely on the availability of such information in the preparation of its Bid or pricing of the Work. In all cases, the Contractor shall take appropriate measures to verify that any electronic/digital information provided in Electronic Documents is appropriate and adequate for the Contractor's specific purposes.

4. In no case will the Contractor be entitled to additional compensation or time for completion due to any differences between the actual Contract Documents and any related document in native file format.

**ARTICLE 3—QUALIFICATIONS OF BIDDERS**

3.01 To demonstrate Bidder's qualifications to perform the Work, within **5** days after submitting its Bid, Bidder must submit the following information:

A. Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.

B. A written statement that Bidder is authorized to do business in the state where the Project is located, or a written certification that Bidder will obtain such authority prior to the Effective Date of the Contract.

C. Bidder's state or other contractor license number, if applicable.

D. Subcontractor and Supplier qualification information.

E. Other required information regarding qualifications.

3.02 Bidder is to submit the following information with its Bid to demonstrate Bidder's

qualifications to perform the Work:

A. Bid Bond Form (if used for required Bid security).

1. Any other form of approved Bid security must be delivered to the Owner's address prior to the Bid opening and must be enclosed in an opaque envelope with the Project title, and, if applicable, the designated portion of the Project for which the Bid is submitted, the name and address of Bidder.

B. Non-Collusion Affidavit.

C. Affidavit Re Accepting Provisions of the Workmen's Compensation Act.

D. Bidder's Qualification Questionnaire, including required attachments.

E. Act 127 Public Works Employment Verification Form.

3.03 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.

3.04 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

3.05 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

**ARTICLE 4—PRE-BID CONFERENCE**

4.01 A pre-bid conference will not be held for this project.

**ARTICLE 5—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE**

5.01 *Site and Other Areas*

A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

5.02 *Existing Site Conditions*

A. *Subsurface and Physical Conditions; Hazardous Environmental Conditions*

1. The Supplementary Conditions identify the following regarding existing conditions at or adjacent to the Site:

a. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data.

b. Those drawings known to Owner of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data.

c. Reports and drawings known to Owner relating to Hazardous

Environmental Conditions that have been identified at or adjacent to the Site.

d. Technical Data contained in such reports and drawings.

2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.

B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05 of the General Conditions, and not in the drawings referred to in Paragraph 5.02.A of these Instructions to Bidders. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

5.03 *Site Visit and Testing by Bidders*

A. Bidder is required to visit the Site and conduct a thorough visual examination of the Site and adjacent areas. During the visit the Bidder must not disturb any ongoing operations at the Site.

B. An opportunity for a Site visit will be available following the pre-bid conference if a pre-bid conference is scheduled. Directions to the Site will be available at the pre-Bid conference.

C. Bidders visiting the Site are required to arrange their own transportation to the Site.

D. All access to the Site other than during a regularly scheduled Site visit must be coordinated through the following Owner or Engineer contacts prior to visiting the Site. Bidder must conduct the required Site visit during normal working hours.

*Arrangements to visit the Site can be made by contacting Owner Monday through Friday between the hours of* ***8:00 AM – 3:30 PM****.*

Project Contacts:

| Owner | Engineer |
|---|---|
| Bethel Township | Steckbeck Engineering & Surveying, Inc. |
| 60 Klahr Road | 279 North Zinns Mill Road, Suite A |
| Bethel, PA 19507 | Lebanon, PA 17042 |
| Bobbi Westhafer | Alexander Kauffman, E.I.T. |
| (717) 933-8813 | (717) 272-7110, ext. 134 |
| betheltownship@comcast.net | akauffman@steckbeck.net |

E. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.

F. On request, and to the extent Owner has control over the Site, and as the schedule may allow, the Owner will provide Bidder general access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site. Bidder is responsible for establishing access needed to reach specific selected test sites.

G. Bidder must comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.

H. Bidder must fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

5.04 *Owner's Safety Program*

A. Site visits and work at the Site may be governed by an Owner safety program. As per Paragraph 7.13.G of the General Conditions, if an Owner safety program exists, it will be noted in the Supplementary Conditions.

5.05 *Other Work at the Site*

A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

**ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS**

6.01 *Express Representations and Certifications in Bid Form, Agreement*

A. The Bid Form that each Bidder will submit contains express representations regarding the Bidder's examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and certifications, and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.

B. If Bidder is awarded the Contract, Bidder (as Contractor) will make similar express representations and certifications when it executes the Agreement.

**ARTICLE 7—INTERPRETATIONS AND ADDENDA**

7.01 Owner on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.

7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing. Contact information and submittal procedures for such questions are as follows:

A. All questions shall be submitted to Engineer in writing via the Public Bidding Website (i.e. "Public Q&A" feature in PennBid).

7.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than seven days prior to the date for opening of Bids may not be answered.

7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

**ARTICLE 8—BID SECURITY**

8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of **ten percent (10%)** of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a bank cashier's check or a Bid bond *(on the form provided with the Bidding Documents)* issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions. Bid bonds will be issued in the form included in the Bidding Documents.

8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract and furnish the required Contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.

8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.

8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid opening.

**ARTICLE 9—CONTRACT TIMES**

9.01 The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) ready for final payment, and (c) Milestones (if any) are to be achieved,

are set forth in the Agreement.

9.02 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

**ARTICLE 10—SUBSTITUTE AND "OR EQUAL" ITEMS**

10.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or "or-equal" items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or "or-equal" item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.

10.02 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of "or-equal" or substitution requests are made at Bidder's sole risk.

**ARTICLE 11—SUBCONTRACTORS, SUPPLIERS, AND OTHERS**

11.01 A Bidder must be prepared to retain specific Subcontractors and Suppliers for the performance of the Work if required to do so by the Bidding Documents or in the Specifications. If a prospective Bidder objects to retaining any such Subcontractor or Supplier and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.

11.02 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to Owner in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five (5) days after Bid opening, submit to Owner a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required.

11.03 If requested by Owner, such list must be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, without an increase in Bid price.

11.04 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity, so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to

Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.07 of the General Conditions.

**ARTICLE 12—PREPARATION OF BID**

12.01 The Bid Form is included with the Bidding Documents.

A. All blanks on the Bid Form must be completed in ink and the Bid Form signed in ink. Erasures or alterations must be initialed in ink by the person signing the Bid Form. A Bid price must be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.

B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid" or "Not Applicable."

12.02 If Bidder has obtained the Bidding Documents as Electronic Documents from the Public Bidding Website (i.e. PennBid), then Bidder shall prepare its Bid on a paper copy of the Bid Form printed from the Electronic Documents version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible, printed on 8½ inch by 11-inch paper and as closely identical in appearance to the Electronic Document version of the Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the original paper version of the Bid Form, providing that all required information and submittals are included with the Bid.

12.03 A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown.

12.04 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.

12.05 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.

12.06 A Bid by an individual must show the Bidder's name and official address.

12.07 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.

12.08 All names must be printed in ink below the signatures.

12.09 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.

12.10 Postal and e-mail addresses and telephone number for communications regarding the Bid must be shown.

12.11 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within

the time for acceptance of Bids and attach such certification to the Bid.

12.12 If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder's licensure, or Bidder must certify in writing that it will obtain such licensure within the time for acceptance of Bids and attach such certification to the Bid. Bidder's state contractor license number, if any, must also be shown on the Bid Form.

**ARTICLE 13—BASIS OF BID**

13.01 *Lump Sum*

A. Bidders must submit a Bid on a lump sum basis as set forth in the Bid Form.

**ARTICLE 14—SUBMITTAL OF BID**

14.01 Bids shall be submitted electronically via the Public Bidding Website (i.e. PennBid), which shall include completion of the electronic bid forms, and uploading of all required supporting documents. With each copy of the Bidding Documents, Bidders are furnished PDF copies of the Bid Form and the Bid Bond Form. The Bid Form must be completed and uploaded to the Public Bidding Website (i.e. PennBid). Also upload the following documents:

A. Bid Bond Form (if used for required Bid security).

1. Any other form of approved Bid security must be delivered to the Owner's address prior to the Bid opening and must be enclosed in an opaque envelope with the Project title, and, if applicable, the designated portion of the Project for which the Bid is submitted, the name and address of Bidder.

B. Non Collusion Affidavit.

C. Affidavit Re Accepting Provisions of the Workmen's Compensation Act.

D. Bidder's Qualifications Questionnaire, including related attachments.

E. Act 127 Public Works Employment Verification Form.

14.02 Bids shall be submitted no later than the date and time prescribed in the advertisement or invitation to bid. Bids submitted by any other means will not be accepted.

**ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID**

15.01 A Bid may be modified or withdrawn within the Public Bidding Website (i.e. PennBid) at any time prior to the due date and time listed in the invitation to bid.

15.02 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

**ARTICLE 16—OPENING OF BIDS**

16.01 Bids will be opened in the Public Bidding Website (i.e. PennBid) as indicated in the advertisement or invitation to bid. The bid results will be posted as a public notice available to Bidders on the Public Bidding Website (i.e. PennBid) shortly after the opening and processing of bid results.

**ARTICLE 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE**

17.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

**ARTICLE 18—EVALUATION OF BIDS AND AWARD OF CONTRACT**

18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder.

18.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.

18.04 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.

18.05 *Evaluation of Bids*

A. In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.

B. More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

C. In the comparison of Bids, alternates will be selected and applied to the overall Bid price at the sole discretion of the Owner. To determine the Bid prices for purposes of comparison, the Owner will announce selection of alternates after opening the bids. For comparison purposes, alternates selected by the Owner will be added to the base Bid price. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its

base Bid and any combination of its additive or deductive alternate Bids for which Owner determines funds will be available at the time of award.

D. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.

18.06 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Bidding Documents.

18.07 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors, Suppliers, individuals, or entities.

**ARTICLE 19—BONDS AND INSURANCE**

19.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds, other required bonds (if any), and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by required bonds and insurance documentation.

19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

**ARTICLE 20—SIGNING OF AGREEMENT**

20.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required to be delivered by the Contract Documents to Owner. Within 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and/or electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

**ARTICLE 21—SALES AND USE TAXES**

21.01 Refer to Paragraph SC-7.10 of the Supplementary Conditions for additional information.

**ARTICLE 22—PREVAILING WAGES**

The project is subject to compliance with the Pennsylvania Prevailing Wage Act. If that Act or any portion thereof is finally determined by a court to be invalid and unenforceable, any savings realized by the Contractor as a result of such invalidation accrue to the benefit of the Owner. The prospective Bidder agrees, by submitting this Bid, to make payroll records available for audit by the Owner. In the event that the bidder fails to afford the Owner the benefit of any savings

realized under this paragraph the Owner will have the right to withhold payments from this or any other contract in an amount equal to the savings realized plus interest. A schedule of wage rates is enclosed. The Bidder must execute the enclosed Prevailing Wage Compliance Declaration.

# SECTION 004116 – BID FORM FOR CONSTRUCTION CONTRACT

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

**ARTICLE 1—OWNER AND BIDDER**

1.01 This Bid is submitted to:

Bethel Township
60 Klahr Road
Bethel, PA 19507

For the Following Project:

**Old Route 22 Culvert Replacement Project**

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

**ARTICLE 2—ATTACHMENTS TO THIS BID**

2.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security in the form of a bank cashier's check, or bid bond;

B. Bidder Qualifications Questionnaire/Statement with supporting data;

C. Non-Collusion Affidavit;

D. Affidavit Re Accepting Provisions of the Workmen's Compensation Act.

E. Act 127 Verification Form;

**ARTICLE 3—BASIS OF BID—LUMP SUM BID AND UNIT PRICES**

3.01 *Lump Sum Bids*

A. Bidder will complete the Work in accordance with the Contract Documents for the following lump sum (stipulated) price(s):

1. Lump Sum Price (Single Lump Sum)

| | |
|---|---|
| Lump Sum Bid Price | $ |

**ARTICLE 4—TIME OF COMPLETION**

4.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

4.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

**ARTICLE 5—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA**

5.01 *Bid Acceptance Period*

A. This Bid will remain subject to acceptance for 60 days after the Bid opening date as provided by the Act of May 15, 1998 (P.L. 358, No. 57). Bidder will sign the Agreement and submit documents required by the Contract Documents within 15 days after the date of Owner's Notice of Intent to Award.

5.02 *Instructions to Bidders*

A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

5.03 *Receipt of Addenda*

A. Bidder hereby acknowledges receipt of the following Addenda:

| Addendum Number | Addendum Date |
|---|---|
| | |
| | |
| | |
| | |
| | |

**ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS**

6.01 *Bidder's Representations*

A. In submitting this Bid, Bidder represents the following:

1. Bidder has examined and carefully studied the Bidding Documents, including Addenda and other related data identified in the Bidding Documents.
2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, if any, with respect to the Technical Data in such reports and drawings.
5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.

6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding (Contract) Documents; and (c) Bidder's (Contractor's) safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for the performance of the Work at the stipulated price(s), within the Contract Times required, and in accordance with the other terms and conditions of the Bidding and Contract Documents.

8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Bidding and Contract Documents, and the written resolution thereof by Engineer is acceptable to Bidder.

10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

6.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.

2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.

3. Bidder has not solicited or induced any individual or entity to refrain from bidding.

4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 6.02.A:

a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.

b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.

c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.

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

BIDDER hereby submits this Bid as set forth above:

Bidder:

_____

*(typed or printed name of organization)*

By: _____

*(individual's signature)*

Name: _____

*(typed or printed)*

Title: _____

*(typed or printed)*

Date: _____

*(typed or printed)*

*If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.*

Attest: _____

*(individual's signature)*

Name: _____

*(typed or printed)*

Title: _____

*(typed or printed)*

Date: _____

*(typed or printed)*

Address for giving notices:

_____

_____

Bidder's Contact:

Name: _____

*(typed or printed)*

Title: _____

*(typed or printed)*

Phone: _____

Email: _____

Address:

_____

_____

_____

Bidder's Contractor License No.: (if applicable) _____

# SECTION 004313 – BID BOND (PENAL SUM FORM)

| | |
|---|---|
| **Bidder**<br>Name:<br>Address *(principal place of business)*: | **Surety**<br>Name:<br>Address *(principal place of business)*: |
| **Owner**<br>Name: **Bethel Township**<br>Address *(principal place of business)*:<br>**60 Klahr Road**<br>**Bethel, PA 19507** | **Bid**<br>Project *(name and location)*:<br>**Old Route 22 Culvert Replacement Project**<br>**8541 Old Route 22**<br>**Bethel, PA 19507**<br><br>Bid Due Date: **November 11, 2026** |
| **Bond No.:**<br>Penal Sum: $<br>Date of Bond: | |
| Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative. | |
| Bidder | Surety |
| _____<br>*(Full formal name of Bidder)* | _____<br>*(Full formal name of Surety) (corporate seal)* |
| By: _____<br>*(Signature)* | By: _____<br>*(Signature) (Attach Power of Attorney)* |
| Name: _____<br>*(Printed or typed)* | Name: _____<br>*(Printed or typed)* |
| Title: _____ | Title: _____ |
| Attest: _____<br>*(Signature)* | Attest: _____<br>*(Signature)* |
| Name: _____<br>*(Printed or typed)* | Name: _____<br>*(Printed or typed)* |
| Title: | Title: |
| *Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.* | |

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
   3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
   3.2. All Bids are rejected by Owner, or
   3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

**SECTION 004400 – NON-COLLUSION AFFIDAVIT**

STATE OF _____: S.S.

COUNTY OF _____: CONTRACT NO.

I state that I am _____ of _____
*[Title]* *[Name of Firm]*
and that I am authorized to make this affidavit on behalf of my firm, and its owners, directors, and officers. I am the person responsible in my firm for the price(s) and the amount of this bid.

I state that:

(1) The price(s) and amount of this Bid have been arrived at independently and without consultation, communication or agreement with any other Contractor, Bidder or potential Bidder.

(2) Neither the price(s) nor the amount of this Bid, and neither the approximate price(s) nor approximate amount of this Bid, have been disclosed to any other firm or person who is a Bidder or potential Bidder, and they will not be disclosed before bid opening.

(3) No attempt has been made or will be made to induce any firm or person to refrain from bidding on this contract, or to submit a bid higher than this bid, or to submit any intentionally high or noncompetitive bid or other form of complementary bid.

(4) The Bid of my firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive Bid.

(5) _____, its affiliates, subsidiaries, officers, directors and
*[Name of my Firm]*
employees and have not in the last four (4) years been convicted or found liable for any act prohibited by State or Federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding on any public contract, except as follows:

I state that _____ understands and acknowledges that the above
*[Name of my Firm]*
representations are material and important and will be relied on by Bethel Township in awarding the Contract(s) for which this Bid is submitted. I understand, and my firm understands that any misstatement in this affidavit is and shall be treated as fraudulent concealment from the Bethel Township of the true facts relating to the submission of Bids for this Contract.

_____
*[Name and Company Position]*

_____
*[Signature]* *[Date]*

SWORN TO AND SUBSCRIBED BEFORE ME
THIS ____ DAY OF _____, 202_

*Notary Public*
(SEAL)

My Commission Expires:

# SECTION 004600 – ACT 127 VERIFICATION FORM

The Contractor is hereby notified of the following state law requirement applicable to all public works contracts entered into by Bethel Township:

The Commonwealth of Pennsylvania has enacted Act 127 of 2012, known as the Public Works Employment Verification Act ("the Act") which requires all public work contractors and subcontractors to utilize the Federal Government's E-Verify system to ensure that all employees performing work on public work projects are authorized to work in the United States. The effective date of the Act was January 1, 2013.

The Department defines a "Public Work" to be construction, reconstruction, demolition, alteration and/or repair work other than maintenance work, done under contract and paid for in whole or in part out of the funds of a public body where the estimated cost of the total project is in excess of twenty-five thousand dollars ($25,000) but shall not include work performed under a rehabilitation or manpower training program. Bethel Township is a "public body" pursuant to the Act.

In accordance with section 4 (A) of the Act, as precondition of being awarded a contract for a Public Work, prior to the execution of the contract, the Contractor is required to provide Bethel Township with the required Verification Form. In addition, the Act requires that, prior to any work being performed by a subcontractor on a Public Works contract, the subcontractor must provide the Contractor with the Verification Form, which must be submitted to Bethel Township by the Contractor prior to any work being performed, and that any contract between the Contractor and its subcontractor(s) shall contain information about the requirements of the Act.

The Verification Form is included in the bid documents but may be downloaded at the following web address:

https://www.dgs.pa.gov/Design-and-Construction/Bidding/Documents/Public%20Works%20Employment%20Verification%20Form.pdf

The Contractor may access the Federal Government's E-Verify system at the following website:

https://www.e-verify.gov/



Commonwealth of Pennsylvania

Public Works Employment Verification Form

RETURN FORM TO:

Public Works Employment Verification Office
Department of General Services
Bureau of Procurement
6th floor, Forum Place
555 Walnut Street
Harrisburg, PA 17101-1914
717-346-8115
ra-gsgseverify.pa.gov

PLEASE PRINT

Business or Organization Name (Employer) _____

Address_____

City_____ State_____ Zip Code_____

Check One:

☐ Contractor

☐ Subcontractor

Contracting Public Body_____

Contract/Project No._____

Project Description_____

Project Location_____

Date enrolled in E-Verify_____

As a contractor/subcontractor for the above referenced public works contract, I hereby affirm that as of the above date, our company is in compliance with the Public Works Employment Verification Act ('the Act') through utilization of the federal E-Verify Program (EVP) operated by the United States Department of Homeland Security. To the best of my/our knowledge, all employees hired post January 1, 2013 are authorized to work in the United States.

It is also agreed to that all public works contractors/subcontractors will utilize the federal EVP to verify the employment eligibility of each new hire within five (5) business days of the employee start date throughout the duration of the public works contract. Documentation confirming the use of the federal EVP upon each new hire shall be maintained in the event of an investigation or audit.

I, _____, authorized representative of the company above, attest that the information contained in this verification form is true and correct and understand that the submission of false or misleading information in connection with the above verification shall be subject to sanctions provided by law.

_____ _____

Authorized Representative Signature Date of Signature

**SECTION 004700 – AFFIDAVIT RE**
**ACCEPTING PROVISIONS OF THE WORKMEN'S COMPENSATION ACT**

State of )
)
)SS:
)
County of )

Being duly sworn according to law deposes and says that they have / he has / It has accepted the provisions of the Workmen's Compensation Act of 1915 of the Commonwealth of Pennsylvania, with its supplements and amendments, and have insured their liability hereunder in it accordance with the terms of said Act with _____
(SURETY COMPANY)

_____
(TYPE OR PRINT) CONTRACTOR

BY: _____
SIGNATURE

Sworn to and subscribed before me this _____ day of _____A.D. 20 ___.

_____
SIGNATURE

_____
My Commission Expires (DATE)

# SECTION 005213 – AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between **Bethel Township** ("Owner") and _____ ("Contractor").

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby agree as follows:

**ARTICLE 1—WORK**

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

The project includes, but is not limited to, the demolition and removal of an existing culvert pipe and concrete endwalls, the installation of a new 36" SLCPP culvert pipe and associated precast concrete endwalls, minor grading as required, placement of riprap and scour protection, restoration of the roadway, and all other associated work as more fully described in the Construction Drawings.

**ARTICLE 2—THE PROJECT**

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows:

**Old Route 22 Culvert Replacement Project** with the Work being as described above.

**ARTICLE 3—ENGINEER**

3.01 Steckbeck Engineering & Surveying, Inc., 279 N. Zinns Mill Road, Suite A, Lebanon, PA 17042 is to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

3.02 The part of the Project that pertains to the Work has been designed by Steckbeck Engineering & Surveying, Inc., 279 N. Zinns Mill Road, Suite A, Lebanon, PA 17042.

**ARTICLE 4—CONTRACT TIMES**

4.01 *Time is of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Dates*

A. The Work will be substantially complete on or before **December 15, 2026**, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **December 31, 2026**.

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. *Substantial Completion:* Contractor shall pay Owner **$500** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.

2. *Completion of Remaining Work:* After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner **$500** for each day that expires after such time until the Work is completed and ready for final payment.

3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive, and will not be imposed concurrently.

B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

**ARTICLE 5—CONTRACT PRICE**

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:

A. For all Work other than Unit Price Work, a lump sum price of $_____.

B. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

**ARTICLE 6—PAYMENT PROCEDURES**

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make monthly progress payments on the basis of Contractor's Applications for Payment during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract. Contractor shall be advised of the Owner's payment schedule at the pre-construction conference.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.
    a. Ninety (90) percent of the value of the Work completed (with the balance being retainage).
        1) If fifty (50) percent or more of the Work has been completed, as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, the Owner will reduce the retainage to five (5) percent and continue to withhold five (5) percent on additional payments.; and
    b. Ninety (90) percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 200 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 *Consent of Surety*

A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

6.05 *Interest*

A. All amounts not paid when due as provided in Article 14 of the General Conditions shall bear interest at the rate of **six (6)** percent per annum.

**ARTICLE 7—CONTRACT DOCUMENTS**

7.01 *Contents*

A. The Contract Documents consist of all of the following:
    1. This Agreement.
    2. Bonds:
        a. Performance bond (together with power of attorney).
        b. Payment bond (together with power of attorney).
    3. General Conditions.
    4. Supplementary Conditions.

5. Specifications as listed in the table of contents of the project manual (copy of list attached).
6. Drawings (not attached but incorporated by reference) consisting of _____ sheets with each sheet bearing the following general title: **Old Route 22 Culvert Replacement**.
8. Addenda (numbers _____ to _____, inclusive).
9. Exhibits to this Agreement (enumerated as follows):
    a. Permits: N/A
    b. Contractor's Bid (pages _____, inclusive).
    c. Bidders Qualification Questionnaire submitted by Contractor prior to Notice of Award (pages _____, inclusive).
    d. Commonwealth of PA – Public Works Verification Form.
    e. Non-Collusion Affidavit.
10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
    a. Notice to Proceed.
    b. Work Change Directives.
    c. Change Orders.
    d. Field Orders.
    e. Warranty Bond, if any.

B. Except for this Agreement, the Contract Documents listed in Paragraph 7.01.A are incorporated to this Agreement by reference and shall be provided to the Contractor by the Owner upon request.

C. There are no Contract Documents other than those listed above in this Article 7.

D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

**ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS**

8.01 *Contractor's Representations*

A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:

1. Contractor has examined and carefully studied the Contract Documents, including Addenda and other related data identified in the Bidding Documents.
2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.

4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, is any, with respect to the Technical Data in such reports and drawings.

5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.

6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (c) Contractor's safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

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

8.03 *Standard General Conditions*

A. Owner stipulates that if the General Conditions that are made a part of this Contract are Section 007200 (EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee), and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement. Counterparts have been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or have been identified by Owner and Contractor or on their behalf.

This Agreement will be effective on _____ (which is the Effective Date of the Contract).

Owner:

_____
*(typed or printed name of organization)*

By: _____
*(individual's signature)*

Date: _____
*(date signed)*

Name: _____
*(typed or printed)*

Title: _____
*(typed or printed)*

Attest: _____
*(individual's signature)*

Title: _____
*(typed or printed)*

Address for giving notices:

_____

_____

_____

Designated Representative:

Name: _____
*(typed or printed)*

Title: _____
*(typed or printed)*

Address:

_____

_____

_____

Phone: _____

Email: _____

*(If Owner is a corporation, a partnership, or a joint venture, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)*

Contractor:

_____
*(typed or printed name of organization)*

By: _____
*(individual's signature)*

Date: _____
*(date signed)*

Name: _____
*(typed or printed)*

Title: _____
*(typed or printed)*

*(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)*

Attest: _____
*(individual's signature)*

Title: _____
*(typed or printed)*

Address for giving notices:

_____

_____

_____

Designated Representative:

Name: _____
*(typed or printed)*

Title: _____
*(typed or printed)*

Address:

_____

_____

_____

Phone: _____

Email: _____

License No.: _____
*(where applicable)*

State: _____

# SECTION 006110 – EJCDC® C-610, PERFORMANCE BOND

| **Contractor** | **Surety** |
|---|---|
| Name: | Name: |
| Address *(principal place of business)*: | Address *(principal place of business)*: |
| **Owner** | **Contract** |
| Name: **Bethel Township** | Description *(name and location)*: |
| Mailing address *(principal place of business)*: | **Old Route 22 Culvert Replacement Project**<br>**8541 Old Route 22**<br>**Bethel, PA 19507** |
| **60 Klahr Road**<br>**Bethel, PA 19507** | Contract Price: $ |
| | Effective Date of Contract: |

**Bond**

Bond Amount: $

Date of Bond:

*(Date of Bond cannot be earlier than Effective Date of Contract)*

Modifications to this Bond form:

☐ None ☐ See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

| Contractor as Principal | Surety |
|---|---|
| _____ | _____ |
| *(Full formal name of Contractor)* | *(Full formal name of Surety) (corporate seal)* |
| By: _____ | By: _____ |
| *(Signature)* | *(Signature)(Attach Power of Attorney)* |
| Name: _____ | Name: _____ |
| *(Printed or typed)* | *(Printed or typed)* |
| Title: _____ | Title: _____ |
| Attest: _____ | Attest: _____ |
| *(Signature)* | *(Signature)* |
| Name: _____ | Name: _____ |
| *(Printed or typed)* | *(Printed or typed)* |
| Title: _____ | Title: _____ |

*Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.*

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
    3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
    3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
    3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
    5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
    5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
    5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
    5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.

7. if the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

   7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

   7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

   7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.

12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

    14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

    14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

    14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

    14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

    14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

16. Modifications to this Bond are as follows: **None**

# SECTION 006113 – EJCDC® C-615, PAYMENT BOND

| **Contractor** | **Surety** |
|---|---|
| Name: | Name: |
| Address *(principal place of business)*: | Address *(principal place of business)*: |
| **Owner** | **Contract** |
| Name: **Bethel Township** | Description *(name and location)*: **Old Route 22 Culvert Replacement Project** **8541 Old Route 22** **Bethel, PA 19507** |
| Mailing address *(principal place of business)*: **60 Klahr Road** **Bethel, PA 19507** | Contract Price: $ |
| | Effective Date of Contract: |

**Bond**

Bond Amount: $

Date of Bond:

*(Date of Bond cannot be earlier than Effective Date of Contract)*

Modifications to this Bond form:

☐ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

| Contractor as Principal | Surety |
|---|---|
| _____ | _____ |
| *(Full formal name of Contractor)* | *(Full formal name of Surety) (corporate seal)* |
| By: _____ | By: _____ |
| *(Signature)* | *(Signature)(Attach Power of Attorney)* |
| Name: _____ | Name: _____ |
| *(Printed or typed)* | *(Printed or typed)* |
| Title: _____ | Title: _____ |
| Attest: _____ | Attest: _____ |
| *(Signature)* | *(Signature)* |
| Name: _____ | Name: _____ |
| *(Printed or typed)* | *(Printed or typed)* |
| Title: _____ | Title: _____ |

*Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.*

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment, directly or indirectly, of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
    5.1. Claimants who do not have a direct contract with the Contractor
        5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
        5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
    5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
    7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
    7.2. Pay or arrange for payment of any undisputed amounts.
    7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety

shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.

9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.

14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

    16.1. *Claim*—A written statement by the Claimant including at a minimum:

        16.1.1. The name of the Claimant;

        16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;

16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;

16.1.4. A brief description of the labor, materials, or equipment furnished;

16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;

16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;

16.1.7. The total amount of previous payments received by the Claimant; and

16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

18. Modifications to this Bond are as follows: **None**

# STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

**Prepared By**



















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# SECTION 007200 – STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

## ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.

3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

5. *Bidder*—An individual or entity that submits a Bid to Owner.

6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.

7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.

8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.

9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

10. *Claim*

*a.* A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.

c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.

*d.* A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.

13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.

14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.

15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.

16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.

17. *Cost of the Work*—See Paragraph 13.01 for definition.

18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.

19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.

20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.

21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the recipient; (d) the storage and archiving of the Electronic Document by sender and

recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.

23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.

24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.

    a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.

    b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.

    c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.

25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.

28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.

29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.

30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.

31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.

32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.

44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.

45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.

46. *Technical Data*

    a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.

    b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.

    c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.

47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.

48. *Unit Price Work*—Work to be paid for on the basis of unit prices.

49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 *Terminology*

A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives*: The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.

C. *Day*: The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective*: The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

1. does not conform to the Contract Documents;

2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

3. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).

E. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.

4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

F. *Contract Price or Contract Times*: References to a change in "Contract Price or Contract Times" or "Contract Times or Contract Price" or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term "or both" is not expressed.

G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

**ARTICLE 2—PRELIMINARY MATTERS**

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).

B. *Evidence of Contractor's Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.

C. *Evidence of Owner's Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments

during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.

B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.

C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

**ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE**

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.

C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.

D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.

E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

G. Nothing in the Contract Documents creates:

1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or

2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

A. *Standards Specifications, Codes, Laws and Regulations*

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements*: Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents*: If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:

a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

A. Contractor and its Subcontractors and Suppliers shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or

2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

**ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK**

4.01 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.

B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.

B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.

C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:

1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;

2. Abnormal weather conditions;

3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and

4. Acts of war or terrorism.

D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:

1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.

2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.

3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.

E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:

1. The circumstances that form the basis for the requested adjustment;

2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;

3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;

4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and

5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.

G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

**ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS**

5.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.

2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

B. *Removal of Debris During Performance of the Work*: During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.

C. *Cleaning*: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading of Structures*: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;

2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and

3. Technical Data contained in such reports and drawings.

B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

D. *Limitations of Other Data and Documents*: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;

3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or

4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;

2. is of such a nature as to require a change in the Drawings or Specifications;

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. *Engineer's Review*: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. *Owner's Statement to Contractor Regarding Site Condition*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

E. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;

b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:

a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;

b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or

c. Contractor failed to give the written notice required by Paragraph 5.04.A.

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:

1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;

2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;

4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and

5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.

B. *Notice by Contractor*: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.

C. *Engineer's Review*: Engineer will:

1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;

2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;

3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and

4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

D. *Owner's Statement to Contractor Regarding Underground Facility*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

E. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

F. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;

b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and

c. Contractor gave the notice required in Paragraph 5.05.B.

2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;

2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and

3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.

G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.

H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

**ARTICLE 6—BONDS AND INSURANCE**

6.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.

B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.

C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.

E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.

F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.

G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.

H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.

B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

C. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.

D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.

F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.

G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

H. Contractor shall require:

1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and

2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.

I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.

J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.

K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.

M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.

N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

A. *Required Insurance*: Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.

B. *General Provisions*: The policies of insurance required by this Paragraph 6.03 as supplemented must:

1. include at least the specific coverages required;

2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;

3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;

4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and

5. include all necessary endorsements to support the stated requirements.

C. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:

1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;

2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;

3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and

5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.

B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.

C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.

D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.

E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.

1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.

C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.

D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.

C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

**ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES**

7.01 *Contractor's Means and Methods of Construction*

A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.

C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.

B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

A. *Contractor's Request; Governing Criteria*: Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that the proposed item:

1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;

3) has a proven record of performance and availability of responsive service; and

4) is not objectionable to Owner.

b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times; and

2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.

B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.

C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.

E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 *Substitutes*

A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.

1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
    a. will certify that the proposed substitute item will:
        1) perform adequately the functions and achieve the results called for by the general design;
        2) be similar in substance to the item specified; and
        3) be suited to the same use as the item specified.
    b. will state:
        1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
        2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
        3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
    c. will identify:
        1) all variations of the proposed substitute item from the item specified; and
        2) available engineering, sales, maintenance, repair, and replacement services.
    d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.

F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.

B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.

C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.

D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.

E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.

F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.

G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.

I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.

J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.

K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.

L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.

M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.09 *Permits*

A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.

C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.

B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.

C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.

F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.

H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).

J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

1. Before submitting a Shop Drawing or Sample, Contractor shall:

a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determine and verify:

1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;

2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;

c. confirm that the Submittal is complete with respect to all related data included in the Submittal.

2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

B. *Submittal Procedures for Shop Drawings and Samples*: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. *Shop Drawings*

a. Contractor shall submit the number of copies required in the Specifications.

b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.

2. *Samples*

a. Contractor shall submit the number of Samples required in the Specifications.

b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Engineer's Review of Shop Drawings and Samples*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.

3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.

6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.

7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. *Resubmittal Procedures for Shop Drawings and Samples*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.

2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. *Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:

   a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.

   b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.

   c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

   d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.

2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03. 2.04, and 2.05.

F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.

B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:

1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and

2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.

C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:

1. Observations by Engineer;

2. Recommendation by Engineer or payment by Owner of any progress or final payment;

3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. Use or occupancy of the Work or any part thereof by Owner;

5. Any review and approval of a Shop Drawing or Sample submittal;

6. The issuance of a notice of acceptability by Engineer;

7. The end of the correction period established in Paragraph 15.08;

8. Any inspection, test, or approval by others; or

9. Any correction of defective Work by Owner.

E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.

B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 *Delegation of Professional Design Services*

A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.

B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.

C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design

professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.

E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:

1. Checking for conformance with the requirements of this Paragraph 7.19;

2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and

3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.

F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.

G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

**ARTICLE 8—OTHER WORK AT THE SITE**

8.01 *Other Work*

A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.

C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.

D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to

Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:

1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;

2. An itemization of the specific matters to be covered by such authority and responsibility; and

3. The extent of such authority and responsibilities.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.

2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.

C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

**ARTICLE 9—OWNER'S RESPONSIBILITIES**

9.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.

C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.

B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

**ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION**

10.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.

B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

A. Engineer has the authority to reject Work in accordance with Article 14.

B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.

C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.

D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

**ARTICLE 11—CHANGES TO THE CONTRACT**

11.01 *Amending and Supplementing the Contract*

A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.

B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.

C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders covering:

1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;

2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;

3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and

4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.

B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

B. If Owner has issued a Work Change Directive and:

1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.

2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.

B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.

B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.

C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.

B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).

C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will be determined as follows:

1. A mutually acceptable fixed fee; or
2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
    a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
    b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
    c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
    d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
    e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
    f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.

B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

A. *Purpose and Content*: Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

B. *Change Proposal Procedures*

1. *Submittal*: Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.

2. *Supporting Data*: The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.

    a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.

    b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

    The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review*: Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.

4. *Engineer's Full Review and Action on the Change Proposal*: Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.

C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

**ARTICLE 12—CLAIMS**

12.01 *Claims*

A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:

1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;

2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;

3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and

4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.

B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.

D. *Mediation*

1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.

2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.

E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.

F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

**ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK**

13.01 *Cost of the Work*

A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:

1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.

5. Other costs consisting of the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.

2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.

3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.

2. The cost of purchasing, renting, or furnishing small tools and hand tools.

3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

6. Expenses incurred in preparing and advancing Claims.

7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:

a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.

b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:

1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.

2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.

2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances*: Contractor agrees that:

1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.

C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

**ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK**

14.01 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.

B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:

1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
3. by manufacturers of equipment furnished under the Contract Documents;
4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.

F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

A. *Contractor's Obligation*: It is Contractor's obligation to assure that the Work is not defective.

B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.

C. *Notice of Defects*: Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.

D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.

E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.

C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.

2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.

C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

**ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD**

15.01 *Progress Payments*

A. *Basis for Progress Payments*: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. *Applications for Payments*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

   a. the Work has progressed to the point indicated;

   b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and

   c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

   a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or

   b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
    a. to supervise, direct, or control the Work;
    b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
    c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
    d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
    e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
    a. the Work is defective, requiring correction or replacement;
    b. the Contract Price has been reduced by Change Orders;
    c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
    d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
    e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
    a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;

c. Contractor has failed to provide and maintain required bonds or insurance;

d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;

e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;

f. The Work is defective, requiring correction or replacement;

g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

h. The Contract Price has been reduced by Change Orders;

i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;

j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;

k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or

l. Other items entitle Owner to a set-off against the amount recommended.

2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.

F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
    a. all documentation called for in the Contract Documents;
    b. consent of the surety, if any, to final payment;
    c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
    d. a list of all duly pending Change Proposals and Claims; and

e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Final Application and Recommendation of Payment*: If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Notice of Acceptability*: In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.

D. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.

E. *Final Payment Becomes Due*: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim, appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. correct the defective repairs to the Site or such adjacent areas;
2. correct such defective Work;
3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.

B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.

C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.

D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

**ARTICLE 16—SUSPENSION OF WORK AND TERMINATION**

16.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);

2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;

3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or

4. Contractor's repeated disregard of the authority of Owner or Engineer.

B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:

1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and

2. enforce the rights available to Owner under any applicable performance bond.

C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.

D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their

reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.

G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and

3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.

B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

**ARTICLE 17—FINAL RESOLUTION OF DISPUTES**

17.01 *Methods and Procedures*

A. *Disputes Subject to Final Resolution*: The following disputed matters are subject to final resolution under the provisions of this article:

1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and

2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.

B. *Final Resolution of Disputes*: For any dispute subject to resolution under this article, Owner or Contractor may:

1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;

2. agree with the other party to submit the dispute to another dispute resolution process; or

3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

**ARTICLE 18—MISCELLANEOUS**

18.01 *Giving Notice*

A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:

1. in person, by a commercial courier service or otherwise, to the recipient's place of business;

2. by registered or certified mail, postage prepaid, to the recipient's place of business; or

3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if

repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

# SUPPLEMENTARY CONDITIONS
# OF THE CONSTRUCTION CONTRACT

**Prepared By**



















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# SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

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# SECTION 007300 –SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018) (See Section 007200). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, “Paragraph SC-4.05.”

**ARTICLE 1—DEFINITIONS AND TERMINOLOGY**

SC-1.01.A.16

Add the following sentence to the definition of CONTRACTOR:

> When separate contracts are awarded for different portions of the construction, the term “CONTRACTOR” or “Prime CONTRACTOR” in the Bidding and Contract Documents in each case shall mean the CONTRACTOR who executes each separate OWNER-CONTRACTOR Agreement.

**ARTICLE 2—PRELIMINARY MATTERS**

2.02 *Copies of Documents*

SC-2.02

Amend the first sentence of Paragraph 2.02.A. to read as follows:

> Owner shall furnish to Contractor one (1) printed copy of the Contract Documents (including one fully signed counterpart of the Agreement), and One (1) copy in electronic portable document format (PDF).

2.06 *Electronic Transmittals*

SC-2.06 Delete Paragraphs 2.06.B and 2.06.C in their entirety and insert the following in their place:

B. *Electronic Documents Protocol:* The parties shall conform to the following provisions in Paragraphs 2.06.B and 2.06.C, together referred to as the Electronic Documents Protocol (“EDP” or “Protocol”) for exchange of electronic transmittals.

1. *Basic Requirements*

a. To the fullest extent practical, the parties agree to and will transmit and accept Electronic Documents in an electronic or digital format using the procedures described in this Protocol. Use of the Electronic Documents and any information contained therein is subject to the requirements of this Protocol and other provisions of the Contract.

b. The contents of the information in any Electronic Document will be the responsibility of the transmitting party.

c. Electronic Documents as exchanged by this Protocol may be used in the same manner as the printed versions of the same documents that are exchanged using non-electronic format and methods, subject to the same governing requirements, limitations, and restrictions, set forth in the Contract Documents.

d. Except as otherwise explicitly stated herein, the terms of this Protocol will be incorporated into any other agreement or subcontract between a party and any third party for any portion of the Work on the Project, or any Project-related services, where that third party is, either directly or indirectly, required to exchange Electronic Documents with a party or with Engineer. Nothing herein will modify the requirements of the Contract regarding communications between and among the parties and their subcontractors and consultants.

e. When transmitting Electronic Documents, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the receiving party's use of software application packages, operating systems, or computer hardware differing from those established in this Protocol.

f. Nothing herein negates any obligation 1) in the Contract to create, provide, or maintain an original printed record version of Drawings and Specifications, signed and sealed according to applicable Laws and Regulations; 2) to comply with any applicable Law or Regulation governing the signing and sealing of design documents or the signing and electronic transmission of any other documents; or 3) to comply with the notice requirements of Paragraph 18.01 of the General Conditions.

2. *System Infrastructure for Electronic Document Exchange*

a. Each party will provide hardware, operating system(s) software, internet, e-mail, and large file transfer functions ("System Infrastructure") at its own cost and sufficient for complying with the EDP requirements. With the exception of minimum standards set forth in this EDP, and any explicit system requirements specified by attachment to this EDP, it is the obligation of each party to determine, for itself, its own System Infrastructure.

2) Each Party assumes full and complete responsibility for any and all of its own costs, delays, deficiencies, and errors associated with converting, translating, updating, verifying, licensing, or otherwise enabling its System Infrastructure, including operating systems and software, for use with respect to this EDP.

b. Each party is responsible for its own system operations, security, back-up, archiving, audits, printing resources, and other Information Technology ("IT") for maintaining operations of its System Infrastructure during the Project, including coordination with the party's individual(s) or entity responsible for managing its System Infrastructure and capable of addressing routine communications and other IT issues affecting the exchange of Electronic Documents.

c. Each party will operate and maintain industry-standard, industry-accepted, ISO-standard, commercial-grade security software and systems that are intended to protect the other party from: software viruses and other malicious software like

worms, trojans, adware; data breaches; loss of confidentiality; and other threats in the transmission to or storage of information from the other parties, including transmission of Electronic Documents by physical media such as CD/DVD/flash drive/hard drive. To the extent that a party maintains and operates such security software and systems, it shall not be liable to the other party for any breach of system security.

d. In the case of disputes, conflicts, or modifications to the EDP required to address issues affecting System Infrastructure, the parties shall cooperatively resolve the issues; but, failing resolution, the Owner is authorized to make and require reasonable and necessary changes to the EDP to effectuate its original intent. If the changes cause additional cost or time to Contractor, not reasonably anticipated under the original EDP, Contractor may seek an adjustment in price or time under the appropriate process in the Contract.

e. Each party is responsible for its own back-up and archive of documents sent and received during the term of the contract under this EDP, unless this EDP establishes a Project document archive, either as part of a mandatory Project website or other communications protocol, upon which the parties may rely for document archiving during the specified term of operation of such Project document archive. Further, each party remains solely responsible for its own post-Project back-up and archive of Project documents after the term of the Contract, or after termination of the Project document archive, if one is established, for as long as required by the Contract and as each party deems necessary for its own purposes.

f. If a receiving party receives an obviously corrupted, damaged, or unreadable Electronic Document, the receiving party will advise the sending party of the incomplete transmission.

g. The parties will bring any non-conforming Electronic Documents into compliance with the EDP. The parties will attempt to complete a successful transmission of the Electronic Document or use an alternative delivery method to complete the communication.

h. The Owner may opt to operate a Project information management system (also referred to in this EDP as “Project Website”) for use of Owner, Engineer and Contractor during the Project for exchange and storage of Project-related communications and information. If a Project Website is established by the Owner, and except as otherwise provided in this EDP or the General Conditions, use of the Project Website by the parties as described in this Paragraph will be mandatory for exchange of Project documents, communications, submittals, and other Project-related information. The following conditions and standards will govern use of the Project Website:

    1) Describe the period of time during which the Project Website will be operated and be available for reliance by the parties;

    2) Provide any minimum system infrastructure, software licensing and security standards for access to and use of the Project Website;

3) Describe the types and extent of services to be provided at the Project Website (such as large file transfer, email, communication and document archives, etc.); and

4) Include any other Project Website attributes that may be pertinent to Contractor's use of the facility and pricing of such use.

C. *Software Requirements for Electronic Document Exchange; Limitations*

1. Each party will acquire the software and software licenses necessary to create and transmit Electronic Documents and to read and to use any Electronic Documents received from the other party (and if relevant from third parties), using the software formats required in this section of the EDP.

a. Prior to using any updated version of the software required in this section for sending Electronic Documents to the other party, the originating party will first notify and receive concurrence from the other party for use of the updated version or adjust its transmission to comply with this EDP.

2. The parties agree not to intentionally edit, reverse engineer, decrypt, remove security or encryption features, or convert to another format for modification purposes any Electronic Document or information contained therein that was transmitted in a software data format, including Portable Document Format (PDF), intended by sender not to be modified, unless the receiving party obtains the permission of the sending party or is citing or quoting excerpts of the Electronic Document for Project purposes.

3. Software and data formats for exchange of Electronic Documents will conform to the requirements set forth in Exhibit A to this EDP, including software versions, if listed.

SC-2.06 Supplement Paragraph 2.06 of the General Conditions by adding the following paragraph:

D. *Requests by Contractor for Electronic Documents in Other Formats*

1. Release of any Electronic Document versions of the Project documents in formats other than those identified in the Electronic Documents Protocol (if any) or elsewhere in the Contract will be at the sole discretion of the Owner.

2. To extent determined by Owner, in its sole discretion, to be prudent and necessary, release of Electronic Documents versions of Project documents and other Project information requested by Contractor ("Request") in formats other than those identified in the Electronic Documents Protocol (if any) or elsewhere in the Contract will be subject to the provisions of the Owner's response to the Request, and to the following conditions to which Contractor agrees:

a. The content included in the Electronic Documents created by Engineer and covered by the Request was prepared by Engineer as an internal working document for Engineer's purposes solely, and is being provided to Contractor on an "AS IS" basis without any warranties of any kind, including, but not limited to any implied warranties of fitness for any purpose. As such, Contractor is advised and acknowledges that the content may not be suitable for Contractor's application, or may require substantial modification and independent verification by Contractor. The content may include limited resolution of models, not-to-scale schematic representations and symbols, use of notes to convey design concepts in lieu of

accurate graphics, approximations, graphical simplifications, undocumented intermediate revisions, and other devices that may affect subsequent reuse.

b. Electronic Documents containing text, graphics, metadata, or other types of data that are provided by Engineer to Contractor under the request are only for convenience of Contractor. Any conclusion or information obtained or derived from such data will be at the Contractor's sole risk and the Contractor waives any claims against Engineer or Owner arising from use of data in Electronic Documents covered by the Request.

c. Contractor shall indemnify and hold harmless Owner and Engineer and their subconsultants from all claims, damages, losses, and expenses, including attorneys' fees and defense costs arising out of or resulting from Contractor's use, adaptation, or distribution of any Electronic Documents provided under the Request.

d. Contractor agrees not to sell, copy, transfer, forward, give away or otherwise distribute this information (in source or modified file format) to any third party without the direct written authorization of Engineer, unless such distribution is specifically identified in the Request and is limited to Contractor's subcontractors. Contractor warrants that subsequent use by Contractor's subcontractors complies with all terms of the Contract Documents and Owner's response to Request.

3. In the event that Owner elects to provide or directs the Engineer to provide to Contractor any Contractor-requested Electronic Document versions of Project information that is not explicitly identified in the Contract Documents as being available to Contractor, the Owner shall be reimbursed by Contractor on an hourly basis (at $250 per hour) for any engineering costs necessary to create or otherwise prepare the data in a manner deemed appropriate by Engineer.

**ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE**

No Supplementary Conditions in this Article.

**ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK**

No Supplementary Conditions in this Article.

**ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS**

5.02 *Use of Site and Other Areas*

SC-5.02 Add the following new paragraphs immediately after Paragraph 5.02.A.2.:

3. Contractor shall be fully responsible for all damages to real estate or personal property of any person outside the Project temporary or permanent rights-of-way, caused by Contractor in performing Work under this contract. Contractor's duties shall include repairing, replacing or restoring the damaged property to its condition prior to such damage or the payment of money damages equal to the reasonable value of the damage caused to such property. If Contractor fails to promptly repair or replace

damaged property, Owner may arrange to have Work performed by others and the cost of such Work will be charged to the Contractor by deduction from a progress payment.

5.03 *Subsurface and Physical Conditions*

SC-5.03 Add the following new paragraphs immediately after Paragraph 5.03.D:

E. The following table lists the reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and specifically identifies the Technical Data in the report upon which Contractor may rely:

| Report Title | Date of Report | Technical Data |
|---|---|---|
| N/A | | |
| | | |
| | | |

F. The following table lists the drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data, and specifically identifies the Technical Data upon which Contractor may rely:

| Drawings Title | Date of Drawings | Technical Data |
|---|---|---|
| N/A | | |
| | | |
| | | |

5.05 Underground Facilities

SC-5.05 Add the following new paragraphs immediately after Paragraph 5.05.A.5.:

6. The existence and location of Underground Facilities indicated on the plans are not guaranteed and shall be investigated and verified in the field by the Contractor before starting work. The Contractor's attention is directed to the existing local, State and Federal regulations and specifically to Pennsylvania Underground Utility Line Protection (UULP) law. PA Act 287 of 1974, as amended by Act 127 of 2024. Extra care shall be exercised when excavating in the vicinity of existing structures and utilities.

7. The Contractor shall be held liable for any damage done by reason of breaking any Underground Facility, including water, sewer, gas, telephone, electrical, or other utility service. The Contractor shall notify all utility companies in advance of construction and cooperate with agents of these companies during the progress of the work. When any utility lines or services become broken or damaged during the progress of the work, the Contractor shall cause them to be repaired at once at his own expense. Delays which would result in adjoining residences or businesses having to go overnight without utilities, or for needlessly long periods during the day, will not be tolerated. The Owner reserves the right to remedy such delays or neglect by ordering outside parties to make repairs at the expense of the Contractor without written notice.

8. Care shall be taken not to move, without the consent of the Engineer, any sewers, culverts, water, gas, electric, telephone, or other pipes or poles or structures. In crossing, or in running parallel with or near utility lines, they shall be securely hung, braced or supported in place until the work is completed. Whenever it is necessary to

interfere with said structures, the Contractor, at his own expense, shall maintain their respective services, and, if necessary, lay temporary lines or structures.

9. Before ordering any material or doing any work, the Contractor shall verify all measurements at the site and shall be responsible for the correctness of same. The Contractor shall, without extra charge, make slight alterations as may be required to make adjustable parts fit to fixed parts, leaving all materials and work complete and in proper order.

10. All dimensions provided in the drawings are to be field checked and verified and any error or inconsistencies are to be communicated to the Engineer before commencing work.

11. Underground Facilities are shown in the Drawings in accordance with the best information available, for the information of the Contractor. The Owner assumes no responsibility for accuracy or completeness of information provided by the owners of the Underground Facilities if different from the Owner.

12. Existing Underground Facilities shall be carefully protected and any damage caused to them by the Work shall be immediately repaired to the satisfaction of the Engineer by the Contractor at his expense, using materials of the kinds damaged.

5.06 *Hazardous Environmental Conditions*

SC-5.06 Add the following new paragraphs immediately after Paragraph 5.06.A.3:

4. The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely:

| Report Title | Date of Report | Technical Data |
|---|---|---|
| N/A | | |
| | | |
| | | |

5. The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data (if any) contained in such Drawings upon which Contractor may rely:

| Drawings Title | Date of Drawings | Technical Data |
|---|---|---|
| N/A | | |
| | | |
| | | |

**ARTICLE 6—BONDS AND INSURANCE**

6.01 *Performance, Payment, and Other Bonds*

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.A:

1. *Required Performance Bond Form:* The performance bond that Contractor furnishes will be in the form of EJCDC® C-610, Performance Bond (2010, 2013, or 2018 edition) (see Section 006110).

2. *Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of EJCDC® C-615, Payment Bond (2010, 2013, or 2018 edition) (See Section 006113).

6.02 *Insurance—General Provisions*

SC-6.02 Add the following paragraph immediately after Paragraph 6.02.B:

1. Contractor may obtain worker's compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in Pennsylvania, (b) is certified or authorized as a worker's compensation insurance provider by the PA Department of Labor and Industry, PA Bureau of Workers Compensation, and (c) has been accepted to provide worker's compensation insurance for similar projects in Pennsylvania within the last 12 months.

6.03 *Contractor's Insurance*

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

D. *Other Additional Insureds:* As a supplement to the provisions of Paragraph 6.03.C of the General Conditions, the commercial general liability, automobile liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies must include as additional insureds (in addition to Owner and Engineer) the following:

**N/A**

E. *Workers' Compensation and Employer's Liability:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance.

| Workers' Compensation and Related Policies | Policy limits of not less than: |
|---|---|
| **Workers' Compensation** | |
| State | Statutory |
| Applicable Federal (e.g., Longshoreman's) | Statutory |
| **Employer's Liability** | |
| Each accident | $500,000 |
| Each employee | $500,000 |
| Policy limit | $500,000 |
| Disease Each Employee | $500,000 |

F. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:

1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,

2. damages insured by reasonably available personal injury liability coverage, and

3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.

G. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial

general liability form (occurrence form) and include the following coverages and endorsements:

1. Products and completed operations coverage.
    a. Such insurance must be maintained for three years after final payment.
    b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
4. Underground, explosion, and collapse coverage.
5. Personal injury coverage.
6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.

H. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:

1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
2. Any exclusion for water intrusion or water damage.
3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
4. Any exclusion of coverage relating to earth subsidence or movement.
5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).
6. Any limitation or exclusion based on the nature of Contractor's work.
7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.

I. *Commercial General Liability—Minimum Policy Limits*

| **Commercial General Liability** | **Policy limits of not less than:** |
|---|---|
| General Aggregate | $2,000,000 |

| Commercial General Liability | Policy limits of not less than: |
|---|---|
| Products—Completed Operations Aggregate | $1,000,000 |
| Personal and Advertising Injury | $1,000,000 |
| Bodily Injury and Property Damage—Each Occurrence | $1,000,000 |
| Medical—Each Person | $10,000 |

J. *Automobile Liability:* Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy must be written on an occurrence basis.

| Automobile Liability | Policy limits of not less than: |
|---|---|
| **Bodily Injury** | |
| Each Person | $1,000,000 |
| Each Accident | $1,000,000 |
| **Property Damage** | |
| Each Accident | $1,000,000 |
| **[or]** | |
| **Combined Single Limit** | |
| Combined Single Limit (Bodily Injury and Property Damage) | $1,000,000 |

K. *Umbrella or Excess Liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

| Excess or Umbrella Liability | Policy limits of not less than: |
|---|---|
| Each Occurrence | $5,000,000 |
| General Aggregate | $5,000,000 |

L. *Using Umbrella or Excess Liability Insurance to Meet CGL and Other Policy Limit Requirements:* Contractor may meet the policy limits specified for employer's liability, commercial general liability, and automobile liability through the primary policies alone, or through combinations of the primary insurance policy's policy limits and partial attribution of the policy limits of an umbrella or excess liability policy that is at least as broad in coverage as that of the underlying policy, as specified herein. If such umbrella or excess liability policy was required under this Contract, at a specified minimum policy limit, such umbrella or excess policy must retain a minimum limit of $5,000,000 after accounting for partial attribution of its limits to underlying policies, as allowed above.

M. *Unmanned Aerial Vehicle Liability Insurance:* If Contractor uses unmanned aerial vehicles (UAV—commonly *referred* to as drones) at the Site or in support of any aspect of the Work, Contractor shall obtain UAV liability insurance in the amounts stated; name Owner, Engineer, and all individuals and entities identified in the Supplementary Conditions as additional insureds; and provide a certificate to Owner confirming Contractor's compliance with this

requirement. Such insurance will provide coverage for property damage, bodily injury or death, and invasion of privacy.

| Unmanned Aerial Vehicle Liability Insurance | Policy limits of not less than: |
|---|---|
| Each Claim | $1,000,000 |
| General Aggregate | $1,000,000 |

6.04 *Builder's Risk and Other Property Insurance*

SC-6.04 Supplement Paragraph 6.04 of the General Conditions with the following provisions:

F. *Builder's Risk Requirements:* The builder's risk insurance must:

1. be written on a builder's risk "all risk" policy form that at a minimum includes insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment stored and in transit, and must not exclude the coverage of the following risks: fire; windstorm; hail; flood; earthquake, volcanic activity, and other earth movement; lightning; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; and water damage (other than that caused by flood).

    a. Such policy will include an exception that results in coverage for ensuing losses from physical damage or loss with respect to any defective workmanship, methods, design, or materials exclusions.

    b. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake, volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance will be provided through other insurance policies acceptable to Owner and Contractor.

2. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.

3. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of contractors, engineers, and architects).

4. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).

5. extend to cover damage or loss to insured property while in transit.
6. allow for the waiver of the insurer's subrogation rights, as set forth in this Contract.
7. allow for partial occupancy or use by Owner by endorsement, and without cancellation or lapse of coverage.
8. include performance/hot testing and start-up, if applicable.
9. be maintained in effect until the Work is complete, as set forth in Paragraph 15.06.D of the General Conditions, or until written confirmation of Owner's procurement of property insurance following Substantial Completion, whichever occurs first.
10 include as named insureds the Owner, Contractor, Subcontractors (of every tier), and any other individuals or entities required by this Contract to be insured under such builder's risk policy. For purposes of Paragraphs 6.04, 6.05, and 6.06 of the General Conditions, and this and all other corresponding Supplementary Conditions, the parties required to be insured will be referred to collectively as "insureds." In addition to Owner, Contractor, and Subcontractors of every tier, include as insureds the following:
    a. **N/A**
11. include, in addition to the Contract Price amount, the value of the following equipment and materials to be installed by the Contractor but furnished by the Owner or third parties:
    a. **N/A**

SC-6.04 Supplement Paragraph 6.04 of the General Conditions with the following provisions:

H. *Builder's Risk and Other Property Insurance Deductibles:* The purchaser of any required builder's risk, installation floater, or other property insurance will be responsible for costs not covered because of the application of a policy deductible.

1. The builder's risk policy (or if applicable the installation floater) will be subject to a deductible amount of no more than $1,000 for direct physical loss in any one occurrence.

**ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES**

7.03 *Labor; Working Hours*

SC-7.03 Add the following new subparagraphs immediately after Paragraph 7.03.C:

1. Regular working hours will be **7:00 am to 5:00 pm, Monday through Friday**
2. Owner's legal holidays are: **New Year's Day, Martin Luther King Jr. Day, President's Day, Good Friday, Memorial Day, Flag Day, National Freedom Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day, Christmas Day**
    a. If Owner consents to Contractor working during non-regular working hours, Saturday or Sunday, or any legal holiday, Contractor shall reimburse Owner for wages, salaries, and expenses paid to Owner's and Engineer's personnel which, in the Owner's judgment, are required to be present at the Project site during the Contractor's Work. Contractor's reimbursement to Owner for these extra personnel cost will be in the form of deduction from a progress payment.

7.09 *Permits*

SC-7.09 The Contractor shall be responsible for obtaining a Street Occupancy Permit from Bethel Township, in accordance with Ordinance No. 2009-3.

7.10 *Taxes*

SC-7.10 Add a new paragraph immediately after Paragraph 7.10.A:

B. Contractor shall be solely responsible for determining whether Contractor is responsible for paying State sales tax on his purchases. Owner will provide such information as Owner has in his possession for the completion of any required forms. Neither Owner nor Engineer professes any knowledge or expertise relative to the applicability of State sales tax on purchases associated with this contract.

7.11 *Laws and Regulations*

SC-7.11 Insert the following after Paragraph 7.11.C:

D. Underground Utilities

It shall be the duty of each Contractor who intends to perform excavation or demolition work to: ascertain the location and type of users' lines either by inspection of the attached drawing or, if there be no such drawing, by contacting all users as listed in the County Recorder of Deeds for the appropriate political subdivision; and, to notify all users not less than three (3) days prior to the day of beginning of such work and to request information regarding underground utilities at the work location. Contractor must comply with all requirements of the Underground Utility Line Protection Law, Act 287 of 1974 and Act 127 of 2024, as amended.

E. Erosion Control

Any Contractor involved in an earthmoving activity is responsible for complying with the DEP Regulation Chapter 102, Erosion Control. The Contractor must develop, implement and maintain an erosion and sedimentation control plan and must have the plan available at the earthmoving site. If an erosion and sedimentation control plan is issued by the Engineer, it shall be used until such a time that the Contractor develops a new plan and obtains review comments by the County Conservation District and approval by the local political subdivision and the Engineer.

F. Environmental Protection

Contractor shall comply with all provisions of Federal and State statutes, rules and regulations dealing with the prevention of environmental pollution, and the preservation of public natural resources that affect the project pursuant to the provisions of Act No. 247 of the General Assembly of the Commonwealth of Pennsylvania, approved October 26, 1972.

G. Pennsylvania Prevailing Wage Act

The Pennsylvania Prevailing Wage Act (Act No. 442 – Session of 1961) shall apply to this Project. A copy of the Prevailing Minimum Wage Predetermination is included in Section 008300. Contractor is responsible for compliance with the law, including the following specific requirements:

1. All workmen employed by this project shall be paid not less than the minimum wage rates which have been determined by the Secretary of Labor.

2. Each Contractor and Subcontractor shall keep an accurate record showing the name, craft and the actual hourly rate of wage paid to each workman employed by him in connection with this public work. This record shall be preserved for two years from date of project. This record shall be open to the inspection of the Owner, or representative thereof, and to the Secretary for Labor.

3. Contractors and Sub-Contractors shall post the general prevailing minimum wages for each craft and classification involved, as determined by the Secretary for Labor and in a prominent and easily accessible place at the site of the work.

4. At the completion of the work and as a prerequisite for acceptance by the Owner, each Contractor and Sub-Contractor shall file statements with the Owner of the names and amounts of unpaid wages.

5. Each Contractor and each Subcontractor shall file a statement each week under oath and in form satisfactory to the Secretary certifying that all workmen have been paid wages in strict conformity with the provisions, if any wages remain unpaid, to set forth the amount of wages due and owing to each workmen respectively.

6. Contractors and Subcontractors shall make employees available for interviews by the Owner or representative thereof or to the Secretary of Labor on a reasonable basis. Interviews shall be limited to the employee's name, address, dates worked on the project, hourly rate, job classification, duties, tools and equipment utilized and comments regarding compliance with the labor standards.

H. Steel Products

1. Special attention is drawn to the provisions of the Commonwealth of Pennsylvania "Steel Products Procurement Act" - Act No. 3 of 1978, as amended by Act No. 1982-161 and Act No. 1984-144 and subsequent amendments (73 P.S. 1881 et seq). The Contractor is advised that only steel products as defined in said Act (which includes cast iron in the definition of steel products) shall be used or supplied in the performance of the contract for public works or any subcontracts thereunder.

2. With each shipment of Steel products delivered to the Project Site, provide to the Engineer the following:

   a. For a steel product identifiable from its fact, certification that Section 4 of the "Steel Product Procurement Act" has been complied with.

   b. For unidentified steel products, documentation such as invoices, bills or lading and mill certification that the steel was melted and manufactured in the United States.

   c. When unidentified steel products are supplied, no payment will be made on the Contract until the hereinbefore requirements are met.

   d. Any payments made that should not have been made may be recoverable from a manufacturer or supplier as well as from a Contractor or Subcontractor.

   e. The Contractor will be required to sign a certification indicating compliance with this requirement. Certification form contained in Section 013300 – Submittal Procedures.

I. Air Pollution Control Act

The CONTRACTOR shall adhere to the provisions of the Pennsylvania Act No. 247 of 1972 relating to the prevention of environmental pollution and the preservation of public natural resources.

J. PADEP Management of Fill Policy

1. Owner and Contractor are responsible for complying with PADEP Management of Fill Policy. In the event that the Owner is subjected to penalties or damages due to Contractor's or its Subcontractor's failure to comply with this policy, the Contractor shall hold the Owner harmless from and against any such penalty or damage. Owner shall be entitled to deduct from amounts due under this Agreement any penalties or damages assessed against or incurred by Owner resulting from Contractor's or its Subcontractors violation of DEP Management of Fill Policy. Contractor shall not be entitled to an extension of time or damages for any delay arising from Contractor's or its Subcontractor's failure to comply with policy.

2. In the event that the Contractor is subjected to penalties or damages due to Owner's failure to comply with DEP Management of Fill Policy, the Owner shall hold the Contractor harmless from and against any such penalty or damage. Contractor shall be entitled to an extension of time or to damages for any delay arising from Owners failure to comply with policy.

3. The Contractors shall not use any suspect fill or regulated fill on the job unless directed by Engineer.

4. The Contractor shall notify Engineer, if any suspect fill is encountered during excavation. The suspect fill is to be segregated and managed by the Contractor. Segregation and management of suspect fill shall be performed by the Contractor at no additional cost to the Owner.

a. Contractor shall coordinate with Engineer and take samples of fill, if Engineer directs testing of the suspect fill. The Owner will pay for laboratory costs for fill analysis (unless as covered in item c below).

b. Contractor shall provide property Owner of sites where suspect fill is placed with the required forms as contained in the PADEP Management of Fill Policy.

c. Pre-existing regulated fill encountered during excavation and the Project site shall be disposed by the Owner, except when the regulated fill is created by the Contractor by a spill or other means. In those cases the Contractor is responsible for disposal as well as any testing of the fill.

7.13 *Safety and Protection*

SC-7.13 Insert the following after Paragraph 7.13.J:

K. Contractor is responsible for all Site safety, including safety of his workers, safety of the general public, and safety of the Owner and Engineers, agents, and employees who may visit the Site. All Contractors on the Project are responsible for the safety of their employees and for the safe condition of their work. Compliance with all OSHA standards is the responsibility of each Contractor.

L. Nothing contained in the Contract Documents shall be construed to require or authorize Engineer or Owner to supervise or be in any way responsible for Contractor's compliance

with any applicable safety regulations, codes or procedures. Engineer or Owner shall have no duty to inform the Contractor of any safety violations, and should Engineer or Owner voluntarily point out safety violations, such actions shall not be construed to mean that Engineer or Owner has assumed any responsibility for Contractor's compliance with any applicable safety regulations, codes, or procedures. Contractor is solely responsible for Project Safety.

M. The Work under this project may include excavations in excess of 5-foot depth which fall under OSHA standards (29 CFR Part 1926). Concurrent with the issuance of a Notice to Proceed, the Engineer may issue a written notice to the local OSHA office alerting them to this activity.

**ARTICLE 8—OTHER WORK AT THE SITE**

No Supplementary Conditions in this Article.

**ARTICLE 9—OWNER'S RESPONSIBILITIES**

No Supplementary Conditions in this Article.

**ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION**

10.03 *Resident Project Representative*

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. The RPR will act as directed by and under the supervision of Engineer and will confer with Engineer regarding RPR's actions. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:

1. *Schedules:* Review the progress schedule, schedule of submittals, and schedule of values prepared by Contractor and consult with Engineer concerning acceptability.

2. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.

3. *Safety Compliance:* Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.

4. *Liaison*

a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.

b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.

c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.

5. *Interpretation of Contract Documents:* Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.

6. *Submittals, Shop Drawings, and Samples:*

   a. Record dates of receipt and approval of submittals, shop drawings, and samples.

   b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer and Owner of availability of Samples for examination.

7. *Modifications:* Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.

8. *Review of Work; Defective Work*

   a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.

   b. Observe whether any Work in place appears to be defective.

   c. Report to Engineer whenever RPR believes that any part of Contractor's work in progress will not produce a completed Project that conforms generally to the Contract Documents or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

9. *Inspections, Tests, and System Startups:*

   a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.

   b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.

   c. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.

   d. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.

10. *Records:*

    a. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.

b. Maintain records for use in preparing Project documentation.

11. *Reports:*

a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the progress schedule and schedule of Shop Drawing and Sample submittals.

b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.

c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, damage to property by fire or other causes, or the discovery of any Hazardous Environmental Condition.

12. *Payment Requests:* Review Applications for Payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the schedule of values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

13. *Certificates, Operation and Maintenance Manuals:* During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Specifications to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

14. *Completion*

a. Participate in Engineer's visits regarding Substantial Completion.

b. Assist in the determination of Substantial Completion.

c. Assist in the preparation of a tentative punch list of items to be completed or corrected.

d. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work and prepare final punch lists of items to be completed or corrected by Contractor.

e. Observe whether items on the final punch list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the Notice of Acceptability of the Work.

D. The RPR will not:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).

2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.

3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.

4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction unless such advice or directions are specifically required by the Contract Documents.

5 Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.

6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.

7. Accept submittals or samples from anyone other than Contractor.

8. Authorize Owner to occupy the Project in whole or in part.

**ARTICLE 11—CHANGES TO THE CONTRACT**

No Supplementary Conditions in this Article.

**ARTICLE 12—CLAIMS**

No Supplementary Conditions in this Article.

**ARTICLE 13—COST OF WORK; ALLOWANCES, UNIT PRICE WORK**

13.01 *Cost of the Work*

SC-13.01 Supplement Paragraph 13.01.B.5.c.(2) by adding the following sentence:

The equipment rental rate book that governs the included costs for the rental of machinery and equipment owned by Contractor (or a related entity) under the Cost of the Work provisions of this Contract is the most current edition of Rental Rate Blue Book for Construction Equipment.

SC-13.01 Supplement Paragraph 13.01.C.2 by adding the following definition of small tools and hand tools:

a. For purposes of this paragraph, "small tools and hand tools" means any tool or equipment whose current price if it were purchased new at retail would be less than $500.

13.03 *Unit Price Work*

SC-13.03 Delete Paragraph 13.03.E in its entirety and insert the following in its place:

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

a. the extended price of a particular item of Unit Price Work amounts to 5 percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than 25 percent from the estimated quantity of such item indicated in the Agreement; and

b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

**ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCCEPTANCE OF DEFECTIVE WORK**

No Supplementary Conditions in this Article.

**ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD**

15.01 *Progress Payments*

SC-15.01 Delete subparagraph 15.01.D.1 and replace with the following:

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor unless the amount recommended must be approved by Owner's governing body (e.g. Board of Supervisors, Borough Council, Board of School Directors, etc.) in which case the amount recommended will become due ten days following said approval.

SC-15.01 Add the following new Paragraph 15.01.F:

F. For contracts in which the Contract Price is based on the Cost of Work, if Owner determines that progress payments made to date substantially exceed the actual progress of the Work (as measured by reference to the Schedule of Values), or present a potential conflict with the Guaranteed Maximum Price, then Owner may require that Contractor prepare and submit a plan for the remaining anticipated Applications for Payment that will bring payments and progress into closer alignment and take into account the Guaranteed Maximum Price (if any), through reductions in billings, increases in retainage, or other equitable measures. Owner will review the plan, discuss any necessary modifications, and implement the plan as modified for all remaining Applications for Payment.

15.03 *Substantial Completion*

SC-15.03 Add the following new subparagraph to Paragraph 15.03.B:

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15.

15.08 *Correction Period*

SC-15.08 Add the following new Paragraph 15.08.G:

G. The correction period specified as one year after the date of Substantial Completion in Paragraph 15.08.A of the General Conditions is hereby revised to be the number of years set forth in SC-6.01.B.1; or if no such revision has been made in SC-6.01.B, then the correction period is hereby specified to be one year after Substantial Completion except the one year correction period for the punch list item attached to the Certificate of Substantial Completion shall begin on the date that each item on the list is completed or corrected.

**ARTICLE 16—SUSPENSION OF WORK AND TERMINATION**

No Supplementary Conditions in this Article.

**ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES**

17.01 *Methods and Procedures*

*SC-17.01 Delete Paragraph 17.01 of the General Conditions in its entirety and insert the following in its place:*

A. Dispute resolution methods and procedures, if any, shall be as set forth in the Supplementary Conditions. Methods and procedures shall be as follows:

1. There shall be no arbitration involved in this Contract, nor for any disputes or claims arising out of the work of the Contract.

2. All claims, disputes and other matters in question between Owner and Contractor arising out of, or relating to the Contract Documents or the breach thereof (except for claims; which have been waived by the making or acceptance of final payment as provided by paragraph 15.07) will be decided in the applicable court of law, Berks County, Pennsylvania.

3. All claims, disputes and other matters in question between Owner and Contractor arising out of or relating to the Contract Documents or breach thereof shall be presented in writing by Contractor to Owner or designated Owner's representative within ten (10) days of the date of the event giving rise to such claim, dispute, or other matter in question. Failure by the Contractor to comply with this requirement shall make null and void any claim, dispute, or other matter in question. Additionally, any such written notice of claim, dispute, or other matter in question shall be accompanied by a full accounting of all damages, costs, and/or time delays to the Contractor. Failure by the Contractor to comply with this requirement shall make null and void that claim, dispute, or other matter in question.

4. There shall be no relief from the provisions and requirements of this Article 17, and Contractor accepts, agrees to and acknowledges these requirements through submission of a Bid (Proposal) and signing and execution of the Agreement. Any Bidder or Contractor who refuses to accept the provisions and requirements of this Article shall not submit a Proposal nor execute and sign the Agreement.

**ARTICLE 18—MISCELLANEOUS**

No Supplementary Conditions in this Article.

## EXHIBIT A—SOFTWARE REQUIREMENTS FOR ELECTRONIC DOCUMENT EXCHANGE

| Item | Electronic Documents | Transmittal Means | Data Format | Note (1) |
|---|---|---|---|---|
| a.1 | General communications, transmittal covers, meeting notices and responses to general information requests for which there is no specific prescribed form. | Email | Email | |
| a.2 | Meeting agendas, meeting minutes, RFI's and responses to RFI's, and Contract forms. | Email w/ Attachment | PDF | (2) |
| a.3 | Contactors Submittals (Shop Drawings, "or equal" requests, substitution requests, documentation accompanying Sample submittals and other submittals) to Owner and Engineer, and Owner's and Engineer's responses to Contractor's Submittals, Shop Drawings, correspondence, and Applications for Payment. | Email w/ Attachment | PDF | |
| a.4 | Correspondence; milestone and final version Submittals of reports, layouts, Drawings, maps, calculations and spreadsheets, Specifications, Drawings and other Submittals from Contractor to Owner or Engineer and for responses from Engineer and Owner to Contractor regarding Submittals. | Email w/ Attachment or LFE | PDF | |
| a.5 | Layouts and drawings to be submitted to Owner for future use and modification. | Email w/ Attachment or LFE | DWG | |
| a.6 | Correspondence, reports and Specifications to be submitted to Owner for future word processing use and modification. | Email w/ Attachment or LFE | DOC | |
| a.7 | Spreadsheets and data to be submitted to Owner for future data processing use and modification. | Email w/ Attachment or LFE | EXC | |
| a.8 | Database files and data to be submitted to Owner for future data processing use and modification. | Email w/ Attachment or LFE | DB | |

| Notes | |
|---|---|
| (1) | All exchanges and uses of transmitted data are subject to the appropriate provisions of Contract Documents. |
| (2) | Transmittal of written notices is governed by Paragraph 18.01 of the General Conditions. |

| Key | |
|---|---|
| Email | Standard Email formats (.htm, .rtf, or .txt). Do not use stationery formatting or other features that impair legibility of content on screen or in printed copies |
| LFE | Agreed upon Large File Exchange method (FTP, CD, DVD, hard drive) |
| PDF | Portable Document Format |
| DWG | Autodesk® AutoCAD .dwg format |
| DOC | Microsoft® Word .docx format |
| EXC | Microsoft® Excel .xlsx format |
| DB | Microsoft® Access .mdb format |


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# SECTION 007363 - SECURITY

## PART 1 - GENERAL

1.01 PROTECTION OF WORK AND PROPERTY

A. The CONTRACTOR shall take positive measures at all times to prevent entry onto the site of work and storage areas by children, animals, and unauthorized adults.

1. The CONTRACTOR shall furnish and construct temporary fencing as required to fence off excavation, storage, and operating areas.

2. Except as otherwise provided in the Contract Documents, the CONTRACTOR is authorized to refuse admission to the project site to any person whose admission is not specifically authorized in writing by the OWNER.

3. The CONTRACTOR shall provide night security if problems arise at the construction site relating to public safety, etc. Vandalism connected with the construction of the project shall be sufficient grounds for requiring such security.

4. All costs related to security and vandalism shall be considered incidental to the Contract and included under the appropriate bid price by the CONTRACTOR.

## PART 2 - PRODUCTS

Not Used.

## PART 3 - EXECUTION

Not used.

END OF SECTION

# SECTION 008300 – WAGE DETERMINATION SCHEDULE

## Prevailing Wages Project Rates
## State: Pennsylvania
## County: Berks

## Bethel Township
## Old Route 22 Culvert Replacement Project
## Serial Number: 26-09243
## Determination Date[1]: 10/20/2026
## Pages: 6 (not including this page)

1) Per § 9.104 of the Regulations for Pennsylvania Prevailing Wage Act, a new request for predetermination of prevailing wages shall be made if the contract is not awarded within 120 days from the original determination date.

2) **Note: Prevailing wage rates shall only apply if the total project cost is more than $25,000.**

# BUREAU OF LABOR LAW COMPLIANCE
# PREVAILING WAGES PROJECT RATES

| | |
|---|---|
| Project Name: | Old Route 22 Culvert Replacement Project |
| General Description: | The project includes, but is not limited to, the demolition and removal of an existing culvert pipe and concrete endwalls, the installation of a new 36" SLCPP culvert pipe and associated precast concrete endwalls, minor grading as required, placement of riprap and scour protection, restoration of the roadway, and all other associated work as more fully described in the Construction Drawings. |
| Project Locality | Bethel Township |
| Awarding Agency: | Bethel Township |
| Contract Award Date: | 11/11/2026 |
| Serial Number: | 26-09243 |
| Project Classification: | Highway |
| Determination Date: | 10/20/2026 |
| Assigned Field Office: | Scranton |
| Field Office Phone Number: | (570)963-4577 |
| Toll Free Phone Number: | (877)214-3962 |
| Project County: | Berks County |

# BUREAU OF LABOR LAW COMPLIANCE
# PREVAILING WAGES PROJECT RATES

| Project: 26-09243 - Building | Effective Date | Expiration Date | Hourly Rate | Fringe Benefits | Total |
|---|---|---|---|---|---|
| Asbestos & Insulation Workers | 6/30/2025 | | $41.50 | $29.86 | $71.36 |
| Asbestos & Insulation Workers | 6/29/2026 | | $43.50 | $31.11 | $74.61 |
| Boilermaker (Commercial, Institutional, and Minor Repair Work) | 3/1/2026 | | $41.34 | $19.23 | $60.57 |
| Boilermakers | 1/1/2026 | | $58.00 | $36.57 | $94.57 |
| Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners | 5/3/2026 | | $43.53 | $19.17 | $62.70 |
| Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers | 6/1/2026 | | $36.84 | $22.69 | $59.53 |
| Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers | 6/1/2027 | | $36.84 | $24.94 | $61.78 |
| Cement Finishers & Plasterers | 5/3/2026 | | $34.23 | $22.27 | $56.50 |
| Cement Finishers & Plasterers | 5/3/2027 | | $33.49 | $25.01 | $58.50 |
| Cement Masons | 5/1/2025 | | $35.85 | $20.90 | $56.75 |
| Dockbuilder, Pile Drivers | 5/1/2026 | | $56.98 | $37.99 | $94.97 |
| Dockbuilder/Pile Driver Diver | 5/1/2026 | | $66.54 | $41.74 | $108.28 |
| Dockbuilder/pile driver tender | 5/1/2026 | | $56.98 | $37.99 | $94.97 |
| Drywall Finisher | 5/1/2026 | | $33.02 | $24.00 | $57.02 |
| Electricians | 9/1/2025 | | $46.02 | $28.39 | $74.41 |
| Electricians | 8/31/2026 | | $48.02 | $29.46 | $77.48 |
| Elevator Constructor | 1/1/2026 | | $64.06 | $46.01 | $110.07 |
| Floor Coverer | 5/1/2025 | | $37.78 | $19.80 | $57.58 |
| Floor Coverer | 5/1/2026 | | $38.59 | $20.61 | $59.20 |
| Glazier | 5/1/2024 | | $39.48 | $23.81 | $63.29 |
| Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing) | 7/1/2026 | | $40.51 | $33.88 | $74.39 |
| Laborers (Class 01 - See notes) | 5/1/2025 | | $29.27 | $17.84 | $47.11 |
| Laborers (Class 01 - See notes) | 5/1/2026 | | $30.12 | $18.49 | $48.61 |
| Laborers (Class 02 - See notes) | 5/1/2026 | | $32.12 | $18.49 | $50.61 |
| Laborers (Class 02 - see notes) | 5/1/2025 | | $31.27 | $17.84 | $49.11 |
| Laborers (Class 03 - See notes) | 4/27/2025 | | $31.82 | $18.09 | $49.91 |
| Laborers (Class 03 - See notes) | 5/1/2026 | | $32.82 | $18.74 | $51.56 |
| Laborers (Class 04 - See notes) | 4/27/2025 | | $33.82 | $18.09 | $51.91 |
| Laborers (Class 04 - See notes) | 5/1/2026 | | $34.32 | $18.74 | $53.06 |
| Laborers (Class 05 - See notes) | 5/1/2025 | | $31.27 | $17.84 | $49.11 |
| Laborers (Class 05 - See notes) | 5/1/2026 | | $32.12 | $18.49 | $50.61 |
| Laborers (Class 06 - See notes) | 5/1/2025 | | $30.62 | $17.84 | $48.46 |
| Laborers (Class 06 - See notes) | 5/1/2026 | | $31.47 | $18.49 | $49.96 |
| Marble Mason | 5/1/2025 | | $37.71 | $18.73 | $56.44 |
| Marble Mason | 5/3/2026 | | $37.72 | $20.67 | $58.39 |
| Millwright | 6/1/2025 | | $43.00 | $22.95 | $65.95 |
| Millwright | 6/1/2026 | | $44.97 | $22.95 | $67.92 |
| Operators (Building, Class 01 - See Notes) | 5/1/2025 | | $44.89 | $30.92 | $75.81 |
| Operators (Building, Class 01 - See Notes) | 5/1/2026 | | $46.05 | $31.76 | $77.81 |
| Operators (Building, Class 01A - See Notes) | 5/1/2025 | | $47.14 | $31.58 | $78.72 |
| Operators (Building, Class 01A - See Notes) | 5/1/2026 | | $48.30 | $32.42 | $80.72 |

# BUREAU OF LABOR LAW COMPLIANCE
# PREVAILING WAGES PROJECT RATES

| Project: 26-09243 - Building | Effective Date | Expiration Date | Hourly Rate | Fringe Benefits | Total |
|---|---|---|---|---|---|
| Operators (Building, Class 02 - See Notes) | 5/1/2025 | | $44.61 | $30.83 | $75.44 |
| Operators (Building, Class 02 - See Notes) | 5/1/2026 | | $45.77 | $31.67 | $77.44 |
| Operators (Building, Class 02A - See Notes) | 5/1/2025 | | $46.86 | $31.50 | $78.36 |
| Operators (Building, Class 02A - See Notes) | 5/1/2026 | | $48.02 | $32.34 | $80.36 |
| Operators (Building, Class 03 - See Notes) | 5/1/2025 | | $41.88 | $30.03 | $71.91 |
| Operators (Building, Class 03 - See Notes) | 5/1/2026 | | $43.04 | $30.87 | $73.91 |
| Operators (Building, Class 04 - See Notes) | 5/1/2025 | | $40.74 | $29.70 | $70.44 |
| Operators (Building, Class 04 - See Notes) | 5/1/2026 | | $41.90 | $30.54 | $72.44 |
| Operators (Building, Class 05 - See Notes) | 5/1/2025 | | $40.30 | $29.56 | $69.86 |
| Operators (Building, Class 05 - See Notes) | 5/1/2026 | | $41.45 | $30.41 | $71.86 |
| Operators (Building, Class 06 - See Notes) | 5/1/2025 | | $39.42 | $29.30 | $68.72 |
| Operators (Building, Class 06 - See Notes) | 5/1/2026 | | $40.58 | $30.14 | $70.72 |
| Operators (Building, Class 07A- See Notes) | 5/1/2025 | | $54.56 | $35.21 | $89.77 |
| Operators (Building, Class 07A- See Notes) | 5/1/2026 | | $56.03 | $36.14 | $92.17 |
| Operators (Building, Class 07B- See Notes) | 5/1/2025 | | $54.22 | $35.10 | $89.32 |
| Operators (Building, Class 07B- See Notes) | 5/1/2026 | | $55.69 | $36.03 | $91.72 |
| Painters Class 1 (see notes) | 5/1/2025 | | $32.71 | $24.17 | $56.88 |
| Painters Class 1 (see notes) | 5/1/2026 | | $33.89 | $24.69 | $58.58 |
| Painters - Line Stripping | 12/1/2024 | | $44.12 | $27.91 | $72.03 |
| Painters - Line Stripping | 12/1/2025 | | $45.12 | $29.41 | $74.53 |
| Painters Class 2 (see notes) | 5/1/2023 | | $30.09 | $23.19 | $53.28 |
| Painters Class 2 (see notes) | 5/1/2025 | | $35.61 | $24.18 | $59.79 |
| Painters Class 3 (see notes) | 5/1/2025 | | $41.71 | $24.18 | $65.89 |
| Piledrivers | 5/1/2021 | | $43.73 | $37.99 | $81.72 |
| Plasterers | 5/1/2024 | | $32.93 | $21.08 | $54.01 |
| Plasterers | 5/1/2025 | | $34.68 | $21.23 | $55.91 |
| plumber | 5/1/2025 | | $56.28 | $36.01 | $92.29 |
| plumber | 5/1/2026 | | $58.43 | $36.61 | $95.04 |
| Roofers (Composition) | 5/1/2025 | | $46.03 | $34.77 | $80.80 |
| Roofers (Composition) | 5/1/2026 | | $47.53 | $35.22 | $82.75 |
| Roofers (Shingle) | 5/1/2024 | | $34.35 | $22.20 | $56.55 |
| Roofers (Slate & Tile) | 5/1/2024 | | $37.35 | $22.20 | $59.55 |
| Sheet Metal Workers | 6/1/2025 | | $45.02 | $44.71 | $89.73 |
| Sheet Metal Workers | 6/1/2026 | | $46.62 | $46.36 | $92.98 |
| Sign Makers and Hangars | 7/15/2025 | | $33.48 | $26.41 | $59.89 |
| Sign Makers and Hangars | 7/15/2026 | | $36.38 | $25.01 | $61.39 |
| Sprinklerfitters | 4/1/2025 | | $49.75 | $29.21 | $78.96 |
| Sprinklerfitters | 4/1/2026 | | $52.82 | $30.56 | $83.38 |
| Steamfitters | 5/1/2024 | | $59.65 | $43.09 | $102.74 |
| Steamfitters | 5/1/2025 | | $61.47 | $44.89 | $106.36 |
| Terrazzo Finisher | 5/1/2025 | | $36.32 | $21.68 | $58.00 |
| Terrazzo Finisher | 5/1/2026 | | $37.12 | $22.76 | $59.88 |
| Terrazzo Grinder | 5/1/2025 | | $37.10 | $21.68 | $58.78 |
| Terrazzo Grinder | 5/1/2026 | | $37.93 | $22.76 | $60.69 |

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

| Project: 26-09243 - Building | Effective Date | Expiration Date | Hourly Rate | Fringe Benefits | Total |
|---|---|---|---|---|---|
| Terrazzo Mechanics | 5/1/2025 | | $37.17 | $23.43 | $60.60 |
| Terrazzo Mechanics | 5/1/2026 | | $38.06 | $24.51 | $62.57 |
| Tile & Marble Finisher | 5/1/2025 | | $35.31 | $16.99 | $52.30 |
| Tile & Marble Finisher | 5/1/2026 | | $37.26 | $16.99 | $54.25 |
| Tile Setter | 5/1/2025 | | $37.71 | $18.73 | $56.44 |
| Tile Setter | 5/3/2026 | | $37.72 | $20.67 | $58.39 |
| Truckdriver class 1(see notes) | 5/1/2025 | | $41.87 | $0.00 | $41.87 |
| Truckdriver class 2 (see notes) | 5/1/2025 | | $41.94 | $0.00 | $41.94 |
| Truckdriver class 3 (see notes) | 5/1/2025 | | $42.43 | $0.00 | $42.43 |
| Window Film / Tint Installer | 6/1/2025 | | $27.42 | $15.13 | $42.55 |
| Window Film / Tint Installer | 6/1/2026 | | $28.35 | $15.60 | $43.95 |

# BUREAU OF LABOR LAW COMPLIANCE
# PREVAILING WAGES PROJECT RATES

| Project: 26-09243 - Heavy/Highway | Effective Date | Expiration Date | Hourly Rate | Fringe Benefits | Total |
|---|---|---|---|---|---|
| Carpenter | 5/1/2026 | | $37.63 | $21.18 | $58.81 |
| Carpenter Welder | 5/1/2026 | | $38.38 | $21.18 | $59.56 |
| Carpenters - Piledriver/Welder | 1/1/2026 | | $38.38 | $21.18 | $59.56 |
| Cement Finishers | 1/1/2017 | | $27.70 | $20.20 | $47.90 |
| Dockbuilder, Pile Drivers | 5/1/2026 | | $56.98 | $37.99 | $94.97 |
| Dockbuilder/Pile Driver Diver | 5/1/2026 | | $61.88 | $45.47 | $107.35 |
| Dockbuilder/pile driver tender | 5/1/2026 | | $56.98 | $37.99 | $94.97 |
| Electric Lineman | 6/3/2024 | | $52.80 | $30.61 | $83.41 |
| Electric Lineman | 6/2/2025 | | $55.42 | $31.04 | $86.46 |
| Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing) | 7/1/2024 | | $37.26 | $32.63 | $69.89 |
| Laborers (Class 01 - See notes) | 5/1/2025 | | $26.61 | $19.99 | $46.60 |
| Laborers (Class 01 - See notes) | 5/1/2026 | | $27.61 | $20.44 | $48.05 |
| Laborers (Class 02 - See notes) | 5/1/2025 | | $33.23 | $19.99 | $53.22 |
| Laborers (Class 02 - See notes) | 5/1/2026 | | $34.23 | $20.44 | $54.67 |
| Laborers (Class 03 - See notes) | 5/1/2025 | | $30.22 | $19.99 | $50.21 |
| Laborers (Class 03 - See notes) | 5/1/2026 | | $31.22 | $20.44 | $51.66 |
| Laborers (Class 04 - See notes) | 5/1/2025 | | $30.57 | $19.99 | $50.56 |
| Laborers (Class 04 - See notes) | 5/1/2026 | | $31.57 | $20.44 | $52.01 |
| Laborers (Class 05 - See notes) | 5/1/2025 | | $31.24 | $19.99 | $51.23 |
| Laborers (Class 05 - See notes) | 5/1/2026 | | $32.24 | $20.44 | $52.68 |
| Laborers (Class 06 - See notes) | 5/1/2025 | | $30.66 | $19.99 | $50.65 |
| Laborers (Class 06 - See notes) | 5/1/2026 | | $31.66 | $20.44 | $52.10 |
| Laborers (Class 07 - See notes) | 5/1/2025 | | $30.95 | $19.99 | $50.94 |
| Laborers (Class 07 - See notes) | 5/1/2026 | | $31.95 | $20.44 | $52.39 |
| Laborers (Class 08 - See notes) | 5/1/2025 | | $31.43 | $19.99 | $51.42 |
| Laborers (Class 08 - See notes) | 5/1/2026 | | $32.43 | $20.44 | $52.87 |
| Millwright | 6/1/2026 | | $47.52 | $23.33 | $70.85 |
| Operators (Heavy, Class 01 - See Notes) | 5/1/2025 | | $43.46 | $30.50 | $73.96 |
| Operators (Heavy, Class 01 - See Notes) | 5/1/2026 | | $44.61 | $31.35 | $75.96 |
| Operators (Heavy, Class 01A - See Notes) | 5/1/2025 | | $45.71 | $31.16 | $76.87 |
| Operators (Heavy, Class 01A - See Notes) | 5/1/2026 | | $46.86 | $32.01 | $78.87 |
| Operators (Heavy, Class 02 - See Notes) | 5/1/2025 | | $43.18 | $30.41 | $73.59 |
| Operators (Heavy, Class 02 - See Notes) | 5/1/2026 | | $44.34 | $31.25 | $75.59 |
| Operators (Heavy, Class 02A - See Notes) | 5/1/2025 | | $45.43 | $31.08 | $76.51 |
| Operators (Heavy, Class 02A - See Notes) | 5/1/2026 | | $46.59 | $31.92 | $78.51 |
| Operators (Heavy, Class 03 - See Notes) | 5/1/2025 | | $40.26 | $29.55 | $69.81 |
| Operators (Heavy, Class 03 - See Notes) | 5/1/2026 | | $41.43 | $30.38 | $71.81 |
| Operators (Heavy, Class 04 - See Notes) | 5/1/2025 | | $39.12 | $29.22 | $68.34 |
| Operators (Heavy, Class 04 - See Notes) | 5/1/2026 | | $40.28 | $30.06 | $70.34 |
| Operators (Heavy, Class 05 - See Notes) | 5/1/2025 | | $38.67 | $29.09 | $67.76 |
| Operators (Heavy, Class 05 - See Notes) | 5/1/2026 | | $39.83 | $29.93 | $69.76 |
| Operators (Heavy, Class 06 - See Notes) | 5/1/2025 | | $37.80 | $28.82 | $66.62 |
| Operators (Heavy, Class 06 - See Notes) | 5/1/2026 | | $38.96 | $29.66 | $68.62 |
| Operators (Heavy, Class 07A - See Notes) | 5/1/2025 | | $52.85 | $34.71 | $87.56 |

# BUREAU OF LABOR LAW COMPLIANCE
# PREVAILING WAGES PROJECT RATES

| Project: 26-09243 - Heavy/Highway | Effective Date | Expiration Date | Hourly Rate | Fringe Benefits | Total |
|---|---|---|---|---|---|
| Operators (Heavy, Class 07A - See Notes) | 5/1/2026 | | $54.32 | $35.64 | $89.96 |
| Operators (Heavy, Class 07B - See Notes) | 5/1/2025 | | $52.51 | $34.60 | $87.11 |
| Operators (Heavy, Class 07B - See Notes) | 5/1/2026 | | $53.97 | $35.54 | $89.51 |
| Operators (Highway, Class 01 - See Notes) | 5/1/2025 | | $42.56 | $30.24 | $72.80 |
| Operators (Highway, Class 01 - See Notes) | 5/1/2026 | | $43.72 | $31.08 | $74.80 |
| Operators (Highway, Class 01a - See Notes) | 5/1/2025 | | $44.81 | $30.92 | $75.73 |
| Operators (Highway, Class 01a - See Notes) | 5/1/2026 | | $45.97 | $31.76 | $77.73 |
| Operators (Highway, Class 02 - See Notes) | 5/1/2025 | | $41.39 | $29.89 | $71.28 |
| Operators (Highway, Class 02 - See Notes) | 5/1/2026 | | $42.55 | $30.73 | $73.28 |
| Operators (Highway, Class 03 - See Notes) | 5/1/2025 | | $40.70 | $29.68 | $70.38 |
| Operators (Highway, Class 03 - See Notes) | 5/1/2026 | | $41.87 | $30.51 | $72.38 |
| Operators (Highway, Class 04 - See Notes) | 5/1/2025 | | $40.26 | $29.54 | $69.80 |
| Operators (Highway, Class 04 - See Notes) | 5/1/2026 | | $41.41 | $30.39 | $71.80 |
| Operators (Highway, Class 05 - See Notes) | 5/1/2025 | | $39.73 | $29.41 | $69.14 |
| Operators (Highway, Class 05 - See Notes) | 5/1/2026 | | $40.89 | $30.25 | $71.14 |
| Operators (Highway, Class 06 - See Notes) | 5/1/2025 | | $42.80 | $30.30 | $73.10 |
| Operators (Highway, Class 06 - See Notes) | 5/1/2026 | | $43.95 | $31.15 | $75.10 |
| Operators (Highway, Class 06/A - See Notes) | 5/1/2025 | | $45.05 | $30.96 | $76.01 |
| Operators (Highway, Class 06/A - See Notes) | 5/1/2026 | | $46.21 | $31.80 | $78.01 |
| Operators (Highway, Class 07/A - See Notes) | 5/1/2025 | | $51.79 | $34.38 | $86.17 |
| Operators (Highway, Class 07/A - See Notes) | 5/1/2026 | | $53.25 | $35.32 | $88.57 |
| Operators (Highway, Class 07/B - See Notes) | 5/1/2025 | | $50.37 | $33.97 | $84.34 |
| Operators (Highway, Class 07/B - See Notes) | 5/1/2026 | | $51.84 | $34.90 | $86.74 |
| Painters - Line Stripping | 12/1/2024 | | $44.12 | $27.91 | $72.03 |
| Painters - Line Stripping | 12/1/2025 | | $45.12 | $29.41 | $74.53 |
| Painters Class 2 (see notes) | 5/1/2025 | | $35.61 | $24.18 | $59.79 |
| Painters Class 2 (see notes) | 5/1/2026 | | $38.00 | $24.79 | $62.79 |
| Painters Class 3 (see notes) | 5/1/2025 | | $41.71 | $24.18 | $65.89 |
| Painters Class 3 (see notes) | 5/1/2026 | | $44.10 | $24.79 | $68.89 |
| Piledrivers | 5/1/2025 | | $36.87 | $20.49 | $57.36 |
| Piledrivers | 5/1/2026 | | $37.63 | $21.18 | $58.81 |
| Steamfitters (Heavy and Highway - Gas Distribution) | 5/1/2025 | | $54.39 | $44.73 | $99.12 |
| Truckdriver class 1(see notes) | 5/1/2025 | | $41.87 | $0.00 | $41.87 |
| Truckdriver class 2 (see notes) | 5/1/2025 | | $41.94 | $0.00 | $41.94 |
| Truckdriver class 3 (see notes) | 5/1/2025 | | $42.43 | $0.00 | $42.43 |

# SECTION 011000 - SUMMARY OF WORK

## PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Site Location.
B. Project Description of Improvements.
C. Field Engineering.
D. Contractor Use of Site and Premises.

1.02 SITE LOCATION

A. The project is located near 8541 Old Route 22, Bethel, PA 19507 in Berks County, Pennsylvania. The site is located at 40.48490966923964, -76.2228198981223.

1.03 PROJECT DESCRIPTION OF IMPROVEMENTS

A. Without intending to limit or restrict the extent of Work, the project is summarized as follows:

The project includes, but is not limited to, the demolition and removal of an existing culvert pipe and concrete endwalls, the installation of a new 36" SLCPP culvert pipe and associated precast concrete endwalls, minor grading as required, placement of riprap and scour protection, restoration of the roadway, and all other associated work as more fully described in the Construction Drawings.

1.04 FIELD ENGINEERING

A. The means for establishing the reference and control points necessary to complete construction is as specified in Section 007200 General Conditions, Article 4.03.

1.05 CONTRACTOR'S USE OF SITE AND PREMISES

A. Confine construction equipment, the storage of materials, and operations of the workmen to within the subject property and permanent and temporary rights of way. This does not preclude CONTRACTOR from procuring lease rights to private property, however, OWNER shall have access to all stored materials for which payment has been rendered.

B. Materials may be stored appropriately along the route of Work provided such stored materials do not unduly restrict public use or infringe on private property.

C. Assume full responsibility for material stored on site including materials for which the OWNER has made payment.

D. Transport materials remaining at the completion of the Project for which the OWNER has made payment to a storage area designated by OWNER.

E. CONTRACTOR shall limit his uses of premises to the Work indicated, so as to allow for Owner occupancy and use by the public.

1. Always keep existing driveways and entrances to adjacent premises clear and available to the property owners. Do not use these areas for parking or storage of materials.

2. Do not unreasonably encumber the site with materials or equipment. Confine stockpiling of materials and location of storage sheds to the areas designated by the OWNER. If additional storage is necessary, obtain and pay for such storage off site at no additional cost to the OWNER.

## PART 2 – PRODUCTS

2.01 As specified on Contract Drawings.

## PART 3 – EXECUTION

Not Used

**END OF SECTION**

# SECTION 013300 – SUBMITTAL PROCEDURES

## PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Submittal procedures and actions

B. Construction progress schedules.

C. Proposed products list.

D. Shop drawings.

E. Product data.

F. Samples.

G. Manufacturers' instructions.

H. Manufacturers' certificates.

I. Steel Products Certification

J. Shop Drawing Work

1.02 SUBMITTAL PROCEDURES

A. Submit three (3) copies or digital copies (PDF) of complete schedule of all anticipated submittal dates to ENGINEER within 14 days of Notice to Proceed. Update schedule at time of submission of each Application for Payment.

B. Transmit each submittal to ENGINEER in accordance with schedule.

C. Sequentially number the transmittals. Resubmittals shall have original number with an alphabetic suffix.

D. Identify Project, CONTRACTOR, Contract No., subcontractor or supplier, pertinent Drawing sheet and detail number(s), and specification Section number, as appropriate.

E. Apply CONTRACTOR's stamp, signed or initialed certifying that review, verification of products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents. Submittals not containing CONTRACTOR's stamp shall be

returned.

F. Schedule submittals to expedite the Project and deliver to ENGINEER at business address. Coordinate submission of related items.

G. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.

H. Provide space for CONTRACTOR and ENGINEER review stamps.

I. Revise and resubmit submittals as required, clearly identify all changes made since previous submittal.

J. ENGINEER shall review submittal and first revision without charge to CONTRACTOR. For all subsequent resubmissions, CONTRACTOR may be charged, by OWNER, for the time and expenses of ENGINEER at ENGINEER's normal charges. Such charge shall be deducted from CONTRACTOR's subsequent payment application.

K. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

1.03 ACTION ON SUBMITTALS

A. ENGINEER's Action: Where action and return are required or requested, ENGINEER will review each submittal, mark with the action taken, and return within a reasonable time period. Where submittal must be held for coordination, CONTRACTOR will be so advised by ENGINEER.

B. Submittals returned with "APPROVED" action indicate that the information submitted was found to be in conformance with the design concept and in compliance with the requirements of the Contract Documents. CONTRACTOR may proceed with performance of the work covered by the submittal.

C. Submittals returned with "APPROVED AS CORRECTED" action indicate that the information submitted was found to be in conformance with the design concept and in compliance with the requirements of the Contract Documents, provided the noted clarifications or corrections are completed. Submission of a corrected submittal indicating the changes noted by ENGINEER is not required. CONTRACTOR may proceed with performance of the work covered by the submittal.

D. Submittals returned with "REVISE AND RESUBMIT" action indicate that: (1) information submitted is at least partially not in conformance with the design concept, (2) information submitted is at least partially not in compliance with the requirements of the Contract Documents, (3) submittal is incomplete and does not include all items required by the individual specification Sections, or (4)

certifications or computations required by the individual specification Sections have not been included in the submittal. Submittal will be returned to CONTRACTOR noting the reasons for noncompliance. CONTRACTOR shall not proceed with the performance of the work covered by submittal until corrected information is submitted and approved.

E. Submittals returned with "NOT APPROVED" action indicate that the ENGINEER interprets the information submitted to be not in conformance with the design concept or not in compliance with the Contract Documents. Performance of the work shall not proceed until submittal is revised, resubmitted, and approved.

1.04. CONSTRUCTION PROGRESS SCHEDULES

A. Submit three copies of initial progress schedule to ENGINEER for review and comments within 15 days after date Notice to Proceed.

B. Revise and resubmit as required based on ENGINEER's review.

C. Submit revised schedule with each Application for Payment, identifying changes since previous version.

D. Submit a horizontal bar chart with separate line for each major section of Work or operation, identifying first work day of each week. Chart shall indicate anticipated starting and completion date, as well as the actual starting and completion date for each activity.

E. Indicate estimated percentage of completion for each item of Work at each submission.

F. Indicate submittal dates required for shop drawings, Product data, samples, and Product delivery dates.

1.05 PROPOSED PRODUCTS LIST

A. Within 15 days after date of Notice to Proceed, submit complete list of major products proposed for use, with name of manufacturer, trade name, and model number of each product. Submit number of copies CONTRACTOR requires plus three (3) copies to be retained by ENGINEER.

B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.06 SHOP DRAWINGS

A. Submit the number of opaque reproductions which CONTRACTOR requires, plus three copies which will be retained by ENGINEER.

B. Each submission of shop drawings must be accompanied by a letter of transmittal listing the items in the submission. Each shop drawing must be marked with the name of the project, the name of the Contractor, and numbered consecutively.

1.07 PRODUCT DATA

A. Submit the number of copies which the CONTRACTOR requires, plus three (3) copies or a digital copy (PDF) which will be retained by the ENGINEER.

B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this Project.

C. After review, distribute in accordance with Submittal Procedures, above.

1.08 SAMPLES

A. Submit samples to illustrate functional and aesthetic characteristics of the Product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.

B. Submit samples of finishes from the full range of manufacturers' standard colors, textures, and patterns for ENGINEER's selection.

C. Include identification on each sample, with full Project information.

D. Submit the number or samples specified in individual specification Sections; two of which will be retained by ENGINEER.

E. Reviewed samples which may be used in the Work are indicated in individual specification Sections.

1.09 MANUFACTURER'S INSTRUCTIONS

A. When specified in individual specification Sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data.

B. Identify conflicts between manufacturers' instructions and Contract Documents.

1.10 MANUFACTURER'S CERTIFICATES

A. When specified in individual specification Sections, submit manufacturers' certificate to ENGINEER for review, in quantities specified for Product Data.

B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference date, affidavits, and certifications as appropriate.

C. Certificates may be recent or previous test results on material or Product, but must be acceptable to ENGINEER.

1.11 PENNSYLVANIA STEEL PRODUCTS ACT CERTIFICATION

A. Use form attached to this Section.

1.12 SHOP DRAWING WORK

A. All work which is related to shop drawing approval shall not be initiated until approved shop drawings have been received from ENGINEER.

B. All work initiated by CONTRACTOR prior to receipt of approved shop drawings shall be at the sole risk of CONTRACTOR. Any and all rework, modifications, reinstallations, etc. necessitated by changes in the Work due to changes required by subsequently approved shop drawings will be done by CONTRACTOR at no increase in Contract Price.

## PART 2 - PRODUCTS

*Not Used*

## PART 3 - EXECUTION

*Not Used*

**STEEL PRODUCTS PROCUREMENT CERTIFICATION: Contractors**

This form must be executed by the Contractor and delivered to the Engineer before any item containing steel may be incorporated into any public works project in the Commonwealth of Pennsylvania. Execute and present this form for each type of steel product to be incorporated as provided above.

A. TO BE COMPLETED BY ALL CONTRACTORS:

1. Name of Contractor's firm: _____ 2. Date Submitted: _____

3. Firm's address: _____ 4. Phone Number: (____) _____

5. Contract No. _____ 6. Contract title: _____

7. Steel Product: _____

8. Name and address of supplier: _____

B. TYPE OF STEEL PRODUCT (check and complete applicable category)

1. Identifiable steel product: 100% of the steel in a product is identifiably marked as manufactured in the United States.

   a. Other documentation required: NONE

   b. Manner in which steel product is identifiable _____

2. Non-identifiable structural steel: Less than 100% of the steel contained in the product is identifiable as provided above. Structural steel is defined as steel products used as a basic structural element of a project (i.e. steel beams, columns, decking, stairways, reinforcing bars, structural lintels, pipes, etc.)

   a. Other documentation required: Bills of lading, invoices and mill certificates that certify that the steel contained in the product was melted or manufactured in the United States.

3. Non-identifiable non-structural steel: all other steel products including door and window frames, machines, equipment, etc.

   a. Other documentation required: i.e. certification from supplier/fabricator.

C. CERTIFICATION: I, the undersigned officer of the above named firm, do certify that, to the best of my knowledge, the steel product listed above complies with the provisions of the Steel Products Procurement Act (73 P.S. , 1881 et seq, as amended). I understand that by signing this document I certify that the facts contained herein are true. I further understand that this document is subject to the provisions of the Unsworn Falsification to Authorities Act (18 P.S. □ 4904) and the Steel Products Procurement Act, which provide penalties including, but not limited to, debarment from bidding on any Commonwealth of Pennsylvania public works project for a period of five years.

Witness:

_____ _____(SEAL)

Secretary or Treasurer President or Vice President

(Corporate Seal)

**END OF SECTION**

# SECTION 014000 - QUALITY CONTROL

## PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Quality assurance and control of installation.

B. References.

C. Inspection and testing laboratory services.

D. Manufacturers' field services and reports.

1.02 QUALITY ASSURANCE AND CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply fully with manufacturers' instructions, including each step in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, request clarification from ENGINEER before proceeding.

D. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

1. Perform work by persons qualified to produce workmanship of specified quality.

2. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.03 REFERENCES

A. Conform to reference standards by date of issue current on date for receiving bids.

B. Should specified reference standards conflict with Contract Documents, request clarification from ENGINEER before proceeding.

C. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.04 INSPECTION AND TESTING LABORATORY SERVICES

A. The CONTRACTOR shall employ and pay for an independent firm which will perform inspections, tests, and other services specified in individual Specifications sections and as required by the ENGINEER.

B. Reports will be submitted by the independent firm to ENGINEER, in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents. CONTRACTOR shall be responsible to ensure reports are submitted to ENGINEER within three days of completion of the test procedures.

C. Cooperate with independent firm; furnish samples of materials, equipment, tools, storage, and assistance as requested.

1. Notify ENGINEER and independent firm 24 hours prior to expected time for operations requiring services.

2. Make arrangements with independent firm and pay for additional samples and tests required for CONTRACTOR's use.

D. Retesting required because of non-conformance to specified requirements shall be performed by the same independent firm on instructions by the ENGINEER. Payment for retesting will be responsibility of the CONTRACTOR.

1.05 MANUFACTURERS' FIELD SERVICES AND REPORTS

A. When specified in individual Specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, startup of equipment, testing, adjusting, and balancing of equipment as applicable, and to initiate instructions when necessary or required by the individual Specification section. Such individual shall provide a written statement indicating that the equipment or product has been installed within the manufacturer's instructions and recommendations and is functioning properly.

B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

C. Submit report in duplicate within 14 days of observation to ENGINEER for review.

## PART 2 - PRODUCTS

*Not Used*

## PART 3 - EXECUTION

*Not Used*

**END OF SECTION**

# SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

## PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Project Construction Facilities

B. Temporary Control

C. Project Identifications

D. Field Offices

1.02 REGULATORY REQUIREMENTS

A. Comply with all applicable laws and regulations of authorities having jurisdiction, including, but not limited to, building codes, health and safety regulations, utility company regulations, and environmental protection regulations.

B. Provide electrical equipment that is UL listed.

1.03 CONTRACTOR RESPONSIBILITIES

A. Although not mandatory CONTRACTOR may furnish, install, and pay for his own field office(s), facilities within his own field office(s), and storage facilities, and shall be responsible for removing these facilities upon completion of the Work.

B. Project construction facilities shall include, but not be limited to, barriers, parking, security, pedestrian control, and maintenance and protection of traffic.

C. Temporary controls shall include dust control, sediment and erosion control, stormwater control, flood prevention, portable toilets, wastewater, traffic control, temporary fencing/security, and progress cleaning.

D. Storm Water Control

1. CONTRACTOR shall be responsible for the Sediment and Erosion Control measures and procedures described in the Contract Documents.

2. Maintain flow of site stormwater. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping facility.

3. Protect site from standing or running water. CONTRACTOR shall be responsible for flood damages to the Work. All flood damages shall be repaired to the satisfaction of ENGINEER.

4. CONTRACTOR assumes responsibility for damages to property caused by flooding due to blocking or restriction of storm water passages, natural waterways, and wastewater facilities.

1.04 PROJECT IDENTIFICATION

A. A project sign identifying the project is optional.

B. No other signs are allowed without OWNER's permission except those required by law.

1.05 ENGINEER'S FIELD OFFICE

A. A field office for the ENGINEER is not required for this project.

1.06 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary above-grade or buried utilities, equipment, facilities, materials, prior to Final Application for Payment inspection.

B. Clean and repair damage caused by installation or use of temporary work.

C. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

1.07 SITE ACCESS

A. The CONTRACTOR is responsible for establishing access to the site of his work. The property and the right-of-way shown on the construction drawings are being provided by the OWNER. Any requirements for additional land required during construction for storage of material, locating trailers, or other temporary facilities, shall be provided by the CONTRACTOR at his cost.

B. Unless otherwise provided by OWNER, the CONTRACTOR shall obtain and provide for all accesses to the property and rights-of-way necessary to construct the project. This may include the acquisition of temporary rights-of-way and driveway permits, as well as the construction of roadways, which are useable by the RPR and the ENGINEER's staff. CONTRACTOR shall be responsible for acquiring, constructing, maintaining, and the restoration of any temporary access facilities required for construction.

C. In the event that the designated site access is also to be utilized for the construction

access, the CONTRACTOR shall be responsible for providing the temporary access, including earthwork, surface and groundwater control, and erosion and sediment requirements, including stabilized entrance. Near the completion of construction, the CONTRACTOR will be responsible for grading or excavation as may be necessary, and the construction of the permanent finished access roadway as provided for in the plans and project manual. In the event that it becomes necessary to utilize completed roadways or partially completed roadways for the delivery of construction material, such as aggregate fill or concrete, the CONTRACTOR shall be responsible for the degradation or damage that may result from this use.

## PART 2 - PRODUCTS

Not Used

## PART 3 - EXECUTION

Not Used

END OF SECTION

# SECTION 015526 – TRAFFIC CONTROL

## PART I – GENERAL

1.01 SECTION INCLUDES

A. Guidelines for traffic control while work is being performed within State Roads and Municipal rights-of-way.

1.02 QUALITY ASSURANCE

A. Requirements of Regulatory Agencies

1. State Highways:

a. Provide traffic control in compliance with the rules and regulations of the Pennsylvania Department of Transportation (PADOT), including but not necessarily limited to the following:

1) PA Code Title 67, Transportation: Chapter 212, Subchapter E. Temporary Traffic Control.

2) PA Code Title 67, Transportation: Chapter 459. Occupancy of Highways by Utilities.

3) Commonwealth of Pennsylvania, Department of Transportation, Publication 408/2020, Specifications, as amended. Section 901 "Maintenance and Protection of Traffic During Construction."

4) Commonwealth of Pennsylvania, Department of Transportation, Bureau of Maintenance and Operations, Temporary Traffic Control Guidelines, Publication 213 (3-21), as amended.

2. Municipal Streets: Same requirements as those specified for State Highways above.

## PART 2 – PRODUCTS

2.01 MATERIALS

A. All traffic control materials and devices shall conform to the requirements of Commonwealth of Pennsylvania, Department of Transportation, Publication

408/2020, Specifications, as amended. Section 901 "Maintenance and Protection of Traffic During Construction."

## PART 3 – EXECUTION

3.01 PROTECTION

A. Maintenance and Protection of traffic shall be in strict accordance with the requirements of regulatory agencies cited in Part 1.02.A.1 above.

B. The CONTRACTOR shall modify sign locations and other traffic control daily in order to protect that section of street to be disturbed during the same day.

C. The CONTRACTOR shall provide reasonable access to all property owners throughout the project construction period. Prior to closure of access to driveways and/or properties, individual property owners shall be given advanced written notice identifying the time period of actual restricted access.

D. The CONTRACTOR will be permitted to close the roadway. A detour plan shall be provided to the ENGINEER and OWNER for approval prior to construction. A PennDOT agreement or formal PennDOT approval may be necessary depending on the proposed detour route.

**END OF SECTION**

# SECTION 016000 – PRODUCT REQUIREMENTS

## PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Products

B. Transportation and handling

C. Storage and protection

1.02 PRODUCTS

A. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for reuse.

B. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.

C. Provide interchangeable components of the same manufacturer, for similar components.

1.03 TRANSPORTATION AND HANDLING

A. Transport and handle Products in accordance with manufacturer's instructions.

B. Promptly inspect shipments to assure that Products comply with requirements, quantities are correct, and Products are undamaged.

C. Provide equipment and personnel to handle Products by methods to prevent soiling, disfigurement, or damage.

1.04 STORAGE AND PROTECTION

A. Store and protect Products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive Products in weathertight, climate-controlled enclosures.

B. For exterior storage of fabricated Products, place on sloped supports, above ground.

C. Provide offsite storage and protection when site does not permit onsite storage or protection.

D. Cover Products subject to deterioration when site does not permit onsite storage or protection.

E. Store loose granular materials on solid flat surfaces in a well drained area. Prevent mixing with foreign matter.

F. Provide equipment and personnel to store Products by methods to prevent soiling, disfigurement, or damage.

G. Arrange storage of Products to permit access for inspection. Periodically inspect to assure Products are undamaged and are maintained under specified conditions.

## PART 2 - PRODUCTS

*Not Used.*

## PART 3 - EXECUTION

*Not used.*

**END OF SECTION**

# SECTION 017400 – CLEANING AND WASTE MANAGEMENT

## PART 1 - GENERAL

1.01 GENERAL

A. Before the work will be considered as having been completed, the CONTRACTOR shall clean the site and remove all evidence of construction activities and restabilize and restore all disturbed areas.

1.02 CLEANUP

A. Construction site cleanup shall consist of the removal of all mud, oil, grease, dust, trash, scrap, debris, and surplus excavated material.

B. No items shall be left or discarded elsewhere on the site or on adjoining private property. Items that are to be discarded shall be removed to authorized/permitted public disposal areas.

1.03 RESTORATION AND RESTABILIZATION

A. All areas disturbed by the CONTRACTOR's operations, including storage and stockpiling areas, access roads, stream crossing sites, and areas within acquired right-of-way shall be restored and restabilized as specified herein.

B. Final restoration and restabilization including fine grading, landscaping, seeding, and paving shall proceed immediately after construction activity is completed in a given area (when the season permits). The CONTRACTOR shall dismantle and remove all temporary construction facilities and leave the site in a neat and orderly condition.

C. Preserve and maintain in their original condition all public and private signs, markers, guard rails, and fences. If authorized to do so, remove such conflicting facilities, preserve, store, and protect them and reerect upon completion of the construction. Replace damaged items at no cost to the OWNER.

D. Protect and guard trees, repair damaged trees or replace trees damaged beyond repair as specified elsewhere in these Specifications.

E. Reseed damaged lawn areas and seed areas temporarily used for access roads, parking and storage as specified elsewhere in these Specifications.

F. Restore gravel surfaces and shoulders to original condition. If existing gravel is contaminated by foreign material, remove, and replace the gravel. Materials and methods of construction shall be in accordance with jurisdictional requirements and applicable permits issued for the work. Areas adjacent to shoulders, if left unstable by

construction, shall be stabilized with gravel.

G. Pavement, curbs, and other paved areas shall be restored in accordance with the requirements of these Specifications.

1.04 DISPOSAL OF WASTE ITEMS

A. Construction waste material shall be disposed of in authorized disposal areas, including municipal facilities if available.

B. Waste material disposed of in an unauthorized area shall be removed by the CONTRACTOR and the area restored to its original condition, at no cost to the OWNER.

1.05 REMOVAL OF CONDEMNED MATERIAL

A. Material brought upon the site which has been determined by the ENGINEER to be unsuitable or not in conformance with the Specifications shall be promptly removed from the site by the CONTRACTOR.

B. If the CONTRACTOR fails to remove the condemned material from the site within 72 hours after receipt of notice from the ENGINEER or OWNER, the OWNER may cause the condemned material to be removed and the cost of such removal charged to the CONTRACTOR.

**PART 2 - PRODUCTS**

Not Used.

**PART 3 - EXECUTION**

Not used.

**END OF SECTION**

# SECTION 017700 – CLOSEOUT PROCEDURES

## PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Final cleaning.

B. Adjusting.

C. Project Record Documents.

D. Warranties.

E. Spare parts and Maintenance Materials.

F. Certificate of Substantial Completion and Notice of Acceptability.

G. Closeout Documents

1.02 FINAL CLEANING

A. Complete final cleaning prior to final inspection.

B. Clean site, sweep paved areas, rake clean landscaped surfaces.

C. Remove waste and surplus materials, rubbish, and construction facilities from the site.

D. Remove debris from limited-access spaces including manholes, valve pits, roofs, plenums, shafts, and equipment vaults.

1.03 ADJUSTING

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

1.04 PROJECT RECORD DOCUMENTS

A. Maintain on site, one set of the following Record Documents. Record revisions to the Work:

1. Drawings

2. Project Manuals

3. Addenda.

4. Change Orders, Work Change Directives, Written Amendments, and Field Orders.

5. Reviewed Shop Drawings, Product Data, and Samples.

B. Store Record Documents separate from documents used for construction.

C. Record information concurrent with construction progress.

D. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:

1. Manufacturer's name and product model and number.

2. Product substitutions or alternates utilized.

3. Changes made by Addenda and Change Orders.

E. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:

1. Measured depths of foundations of buildings and tankage in relation to plant datum.

2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to plant datum.

3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.

4. Field changes of dimension and detail.

5. Details not on original Drawings.

F. Cross out ENGINEER's title block and seal from all documents and stamp all sheets "Record Document by NAME Contractor.

G. Submit documents to ENGINEER with request for final inspection. Final inspection request will not be considered until Project Record Documents acceptable to ENGINEER are received.

1.05 WARRANTIES

A. Provide duplicate copies for each set of submissions.

B. Execute and assemble documents from subcontractors, suppliers, and manufacturers.

C. Provide Table of Contents and assemble in three (3) ring binder with durable plastic cover.

D. Submit prior to Final Application for Payment.

E. No warranty shall start earlier than the date of Substantial Completion, unless approved by the OWNER.

F. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

1.06 SPARE PARTS AND MAINTENANCE MATERIALS

A. Provide products, spare parts, maintenance, and extra materials in quantities specified in individual Specification sections.

B. Deliver to Project site and place in location as directed; obtain receipt prior to Final Application for Payment.

1.07 CERTIFICATE OF SUBSTANTIAL COMPLETION AND NOTICE OF ACCEPTABILITY

A. Enclosed at the end of this section is the Certificate of Substantial Completion form which will be used by the ENGINEER for preparing both the Tentative and Definitive Certificates of Substantial Completion, and the Notice of Acceptability form which ENGINEER will use to give written notice to OWNER and CONTRACTOR.

1.08 CLOSEOUT DOCUMENTS

A. Submit the following documents with final Application for Payment. Statement of Surety Company and Contractor's Affidavit forms are located at end of this Section.

1. Statement of Surety Company:

a. Completed by Surety and submitted by CONTRACTOR.

2. Contractor's Affidavit:

a. Completed and submitted by CONTRACTOR.

3. Evidence of Completed Operations Insurance:

a. Completed by Insurer on Insurer's form and submitted by CONTRACTOR.

## PART 2 – PRODUCTS

*Not Used*

## PART 3 – EXECUTION

*Not Used*

# CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner:
Engineer:
Contractor:
Project:
Contract Name:

Owner's Project No.:
Engineer's Project No.:
Contractor's Project No.:

This ☐ Preliminary ☐ Final Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

_____

Date of Substantial Completion: _____

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work must be as provided in the Contract, except as amended as follows:

Amendments to Owner's Responsibilities: ☐ None ☐ As follows:

_____

Amendments to Contractor's Responsibilities: ☐ None ☐ As follows:

_____

The following documents are attached to and made a part of this Certificate:

_____

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Engineer

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

**STATEMENT OF SURETY COMPANY**

In accordance with the Provisions of Contract No. 1 , Old Route 22 Culvert Replacement Project
(Name of Contract)
for Bethel Township dated _____ between Bethel Township
(Name of Owner) (Owner's Name)

and _____
(Contractor's Name and Address)

and _____ as surety
(Surety's Name and Address)

on the bond of _____after a careful examination of the books and records
(Contractor's Name)
of said Contractor or after receipt of an affidavit from the said Contractor, which examination or affidavit satisfied this Surety Company that all claims for labor, materials, and equipment have been satisfactorily settled, hereby approves of the final payment to the said _____ and by these presents
(Contractor's Name)
witnesseth that payment to the Contractor of the final construction cost invoices shall not relieve the Surety Company of any of its obligations to Bethel Township as set forth in the said Surety Company's Bonds.
(Owner's Name)

IN WITNESS WHEREOF the said Surety Company has hereunto set its hand and seal this day of _____, 20__.

Attested:

_____

_____
(SEAL)

By:_____

Title:_____

NOTE: This statement, if executed by any person other than the President or Vice President of the Surety Company, must be accompanied by a certificate of even date showing authority conferred upon the person so signing to execute such instruments on behalf of the Surety Company represented.

**CONTRACTOR'S AFFIDAVIT**
(For Final Payment Application – Modified to Avoid Misrepresentation)
(EJCDC C-700 Article 15.06.A.3 – Modified Form)

Commonwealth of _____ )
County of _____ )

Before me, the undersigned authority, personally appeared _____ ("Name of Duly Authorized Representative of Contractor") of _____ ("Contractor"), who, being duly sworn, deposes and states as follows:

1. Contract and Project.

   Contractor is the party to the Contract dated _____ with Bethel Township ("Owner") for construction of the Project known as Old Route 22 Culvert Replacement Project ("Project").

2. Payment of Labor, Materials, and Equipment Through the Date of this Affidavit.

   All costs for labor, services, materials, equipment, subcontract work, and other obligations incurred by Contractor in connection with the Work, to the extent due and payable as of the date of this Affidavit, have been paid or otherwise satisfied, except only for retainage or other amounts specifically identified in Paragraph 3 below.

3. Retainage and Amounts Not Yet Due.

   The only amounts not yet paid by Contractor to subcontractors, suppliers, or others furnishing labor, services, materials, or equipment for the Work are:

   a. retainage properly withheld under subcontract or purchase-order terms and not yet due and payable;

   b. undisputed amounts that are not yet due solely because Contractor has not yet received final payment from Owner; and

   c. any amounts specifically identified in an attachment to this Affidavit or in Contractor's Final Application for Payment.

4. Outstanding Claims or Disputed Amounts.

   Other than amounts identified in Paragraph 3 above and any pending Change Proposals or Claims previously submitted in accordance with the Contract Documents, Contractor knows of no unpaid claims, disputes, or indebtedness relating to the Work.

5. Final Lien Waivers / Releases.

   Contractor affirms that, except for retainage and any amounts specifically identified in Paragraph 3 above:

   a. all obligations that could give rise to lien rights or payment claims in connection with the Work have been paid or otherwise satisfied;

b. Contractor is submitting with this Affidavit final lien waivers / releases, whether unconditional or properly conditioned upon receipt of final payment, from Contractor and all subcontractors and suppliers to the extent required by the Contract Documents;

c. the releases, waivers, receipts, and this Affidavit collectively address all labor, services, material, and equipment for which a Lien could be filed; and all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied, except for amounts specifically identified in Paragraph 3 above; and

d. Contractor knows of no liens, claims, or notices of intent to lien filed or asserted in connection with the Work, except as specifically identified in Paragraph 3 above.

6. Additional Supporting Documentation.

   Upon Owner's reasonable request, Contractor shall provide additional documentation satisfactory to Owner supporting the statements made in this Affidavit, including evidence of payment to subcontractors or suppliers, to the extent applicable to the Project and not otherwise addressed by final lien waivers, releases, receipts, or other closeout documentation submitted with the Final Application for Payment.

7. Indemnification.

   Contractor agrees to indemnify and hold Owner harmless from any losses, costs, liens, claims, demands, or expenses, including reasonable attorney's fees, arising from or relating to claims for payment, lien rights, notices of intent to lien, or other payment obligations for labor, services, materials, equipment, subcontract work, or other obligations furnished or incurred in connection with the Work through the date of this Affidavit, to the extent such claims, liens, demands, or obligations are inconsistent with the statements made herein.

FURTHER AFFIANT SAYETH NAUGHT.

_____

(Signature of Duly Authorized Representative of Corporation Named Above)

Title: _____
Date: _____

Subscribed and sworn to before me on this _____ day of _____, 20__.

Notary Public
My commission expires:

**NOTICE OF ACCEPTABILITY OF WORK**

Owner: Owner's Project No.:
Engineer: Engineer's Project No.:
Contractor: Contractor's Project No.:
Project:
Contract Name:
Notice Date: Effective Date of the Construction Contract:

The Engineer hereby gives notice to the Owner and Contractor that Engineer recommends final payment to Contractor, and that the Work furnished and performed by Contractor under the Construction Contract is acceptable, expressly subject to the provisions of the Construction Contract's Contract Documents ("Contract Documents") and to the limits of the Engineer's services and authority for this Project as established by the Owner and by applicable law. This Notice of Acceptability of Work (Notice) is made expressly subject to the following terms and conditions to which all who receive and rely on said Notice agree:

1. This Notice has been prepared with the skill and care ordinarily used by members of the engineering profession practicing under similar conditions at the same time and in the same locality.

2. This Notice reflects and is an expression of the Engineer's professional opinion.

3. This Notice has been prepared to the best of Engineer's knowledge, information, and belief as of the Notice Date.

4. This Notice is based entirely on and expressly limited by the scope of services Engineer has been employed by Owner to perform or furnish during construction of the Project (including observation of the Contractor's Work) under the Owner-Engineer Agreement, and applies only to facts that are within Engineer's knowledge or could reasonably have been ascertained by Engineer as a result of carrying out the responsibilities specifically assigned to Engineer under such Owner-Engineer Agreement.

5. This Notice is not a guarantee or warranty of Contractor's performance under the Construction Contract, an acceptance of Work that is not in accordance with the Contract Documents, including but not limited to defective Work discovered after final inspection, nor an assumption of responsibility for any failure of Contractor to furnish and perform the Work thereunder in accordance with the Contract Documents, or to otherwise comply with the Contract Documents or the terms of any special guarantees specified therein.

6. This Notice does not relieve Contractor of any surviving obligations under the Construction Contract, and is subject to Owner's reservations of rights with respect to completion and final payment.

Engineer
By *(signature)*: _____
Name *(printed)*: _____
Title: _____

**END OF SECTION**

# SECTION 022900 – SITE PREPARATION

## PART 1 GENERAL

### 1.1 SECTION INCLUDES

A. Clearing and grubbing, selective clearing, and selective tree removal and trimming.

B. Stripping and stockpiling of topsoil.

C. Construction associated with CONTRACTOR staging, storage, and field office areas.

### 1.2 REGULATORY REQUIREMENTS

A. Conform to local regulations and codes for disposal of debris. Hazardous materials, as defined by Federal and State regulations, shall only be disposed at permitted sites.

B. Verify that OWNER has obtained NPDES Permit (where applicable) prior to initiating any earthmoving activities as defined by PADEP Chapter 102. Complete Co-permittee application prior to commencing with any earth disturbance activities.

C. Burn brush, trees, and other materials on site only when permitted by local Ordinance. Do not burn any materials that will result in noxious smoke or odors, within 200 feet of any occupied buildings, or when thick smoke will affect adjoining properties.

D. Conduct Work to ensure minimum interference with roads, streets, walks, and other structures or facilities. Do not close or obstruct streets, walks, or other occupied facilities without permission from authorities having jurisdiction. Employ traffic on site in accordance with OWNER's requirements. Employ traffic control measures when working on or along public roadway corridors in accordance with PADOT, Title 67, Chapter 203, when applicable.

E. Conform to OSHA CFR, Part 26, Subpart B – Construction Standards for excavation for all excavations.

### 1.3 SUBMITTALS FOR REVIEW

A. If requested by ENGINEER, submit plan indicating location of test pits, underground utilities uncovered, type of utility, utility materials, size of pipe or conduit, and elevations of inverts based on project datum.

B. If requested by ENGINEER, submit plan showing location and approximate size of CONTRACTOR staging, parking, and field office area. Indicate materials to be used to stabilize temporary parking, staging and field office areas where stabilization will be required.

1. Where an area has been designated on the Drawings, submit plan showing any proposed modifications to staging, parking, and storage area to meet conditions required by the Work.

C. Where shoring, bracing, or other structural support of existing buildings or structures is required, submit plan prepared and sealed by a professional ENGINEER registered in the Commonwealth of Pennsylvania.

## 1.4 PRE-CLEARING MEETING

A. Field mark all individual trees outside of clearing and grubbing limits designated on Drawings to be removed a minimum of two-weeks prior to initiating clearing operations.

B. Field mark limit of clearing and grubbing for all wooded areas to be cleared a minimum of two-weeks prior to initiating clearing operations.

C. Notify OWNER after individual trees have been marked and limited of clearing field identified.

D. Arrange meeting with OWNER, or OWNER's representative, to review clearing and tree removal prior to initiating clearing operations. Explain procedures used to remove trees, disposal methods, and locations of on-site burning areas (when permitted).

## 1.5 SHORING, BRACING, AND UNDERPINNING

A. Protect all existing utilities, structures, and Work during project, including foundation grouting, sheet piling, shoring, bracing, slabjacking, soil stabilization, and underpinning when working adjacent to existing utilities or structures.

B. Perform shoring and bracing in accordance with OSHA requirements when excavating.

C. Review all shoring, bracing, and structure protection operations with ENGINEER prior to beginning the Work.

D. Repair damage, slumping, or collapse due to removal of supporting soils, aggregates, existing in-place retaining or support structures due to failure to provide appropriate protection of existing structures and facilities.

E. Assign design, supervision, and maintenance of all structure protection devices to qualified construction specialist.

## PART 2 PRODUCTS

### 2.1 MATERIALS

A. Temporary Construction Fence:

1. Wood Picket Snow Fence: Undamaged, four (4) feet high, with steel u-channel stakes.
2. Commercially available weather resistant fencing. Use only orange or yellow construction fencing when barricading open excavations.
3. Modular chain link fence (minimum six (6) feet high).

B. Backfill Materials: As specified in Special Provisions - Basic Site Materials and Methods.

C. Herbicide: Commercially available as required to inhibit stump growth, compatible with final seeding and landscaping, and non-damaging to existing vegetation or landscaping to remain.

A. Temporary Stone Paving: Aggregate Type A-2 as specified in Special Provisions - Basic Site Materials and Methods.

## PART 3 EXECUTION

### 3.1 PROTECTION

A. Protect improvements on adjoining properties and OWNER's property designated to remain. Provide temporary fencing when required for protection and as required to define or control site access and separate construction activities for OWNER's use of site.

B. Immediately repair or replace temporary construction fencing where damaged and the area of protection cannot be secured due to the damage.

C. Identify and protect above ground and below ground utilities to remain from damage. Provide protective measures necessary and as required by public utility companies to maintain uninterrupted service.

D. Protect trees, shrubs and plant growth to remain as final landscaping. Erect temporary construction fencing around specimen trees to remain and perimeter of wooded areas to remain.

1. Critical Root Zone (CRZ): CONTRACTOR shall exercise care to avoid compacting, excavating, or damaging the Critical Root Zone of all existing trees to remain. The Critical Root Zone is equal to one foot of radius for each one inch of tree caliper. Individual specimen trees shall have a Critical Root Zone of 1.5 feet for each one inch of tree caliper. The CONTRACTOR shall be responsible for damage caused by all unauthorized operations within the Critical Root Zone and shall be responsible for replacing any existing tree damaged by operations with same species tree with caliper equal to 1/3 of the caliper of the damaged tree.

E. Delineate and protect wetland areas where delineated on Drawings to prevent accidental encroachment or fills.

F. Protect site benchmarks and existing site structures designated to remain.

G. Replace existing trees, shrubs, plants and replace or repair site structures designated to remain that are damaged by the Work. Restore damaged structures to their original or better condition as acceptable to parties having jurisdiction.

3.2 COORDINATION

A. Coordinate clearing and demolition Work to avoid interference with OWNER's occupation of site and other work.

B. Coordinate demolition Work on utility services with installation of temporary utilities, services, and pipelines. Do not remove required utilities until temporary utilities, or new Work, has been installed to provide uninterrupted service.

3.2 PREPARATION

A. Field identify limits of clearing. Notify ENGINEER two weeks prior to beginning clearing operations to permit field review of clearing limits and tagging of trees to remain along clearing perimeter.

B. Verify that existing plant life to remain is tagged and identified.

C. Identify a waste area and salvage area for placing removed materials.

D. Identify and field delineate limits of pavement removal and partial removal of other site structures and paving.

E. Verify that all underground utilities have been located in the area of the Work and that all utility companies having jurisdiction have been properly notified in advance of any excavation Work.

## 3.3 TEST PITS

A. Test pits shall be performed to locate utilities and other subsurface features using hydrovac excavation equipment and methods to excavate straight down to top of utility or buried feature. All excavated slurry material shall be vacuumed into a holding tank until the utility is uncovered. The excavated slurry material shall be disposed of in accordance with local and state regulations.

B. Once the utility is located, measure and record the depth to top of gas main, water main, or gas service line. The depth shall be measured from finish grade to top of utility and reported in feet and inches (fractional).

C. After the measurements are recorded, backfill the test holes with PennDOT 2B or AASHTO No.57 stone.

D. In lawn areas, fill the top 12-inches of hole with topsoil and replace sod that was removed from the top of the test hole.

E. In paved areas, pavement shall be permanently restored to match the existing pavement profile. Between November 1 and April 15, the top five (5) inches of test holes shall be restored with compacted 2P-B bituminous stockpile mix (i.e. cold patch). After April 15, the cold patch shall be removed and permanent pavement restoration shall be completed.

## 3.4 CLEARING

A. Clearing and Grubbing: Clearing and Grubbing includes the complete removal of all trees, shrubs, brush, existing ground cover and grubbing root systems and ground surface to the limits indicated on the Drawings. Unless indicated on Drawings, all clearing shall be considered as Clearing and Grubbing unless specifically designated as Selective Clearing or Selective Tree Removal and Trimming.

1. The method of Clearing and Grubbing shall be performed subject to regulations pertaining to tree removal and erosion and sedimentation control.

2. Trees at the perimeter of the Clearing and Grubbing limit shall be cut or felled in a manner that does not damage the canopy or root systems of existing trees along the clearing perimeter.

B. Selective Clearing: Selective Clearing, when indicated on Drawings, includes the removal of all trees 18-inches in caliper and less as measured five feet above grade, trees greater than 18-inches in caliper as designated by the OWNER and marked in the field prior to bid, all understory growth, and vegetative ground cover. All remaining trees shall be limbed to a height of ten feet above grade.

Where evergreen trees exist in the Selective Clearing area, all existing evergreen trees 5-feet tall and greater shall remain.

1. Selective Clearing shall be performed in a manner that does not damage existing trees or designated plant growth to remain.

2. Treat all exposed cuts of trees limbed as part of Selective Clearing operations to prevent disease and insect damage.

3. Completely grub all areas to permit seeding of Selective Clearing area in accordance with Section 329200 for all areas designated to be seeded on the Drawings. The CONTRACTOR will not be responsible for grubbing areas not designated to be seeded on the Drawings. When seeding the Selective Clearing area is not required, CONTRACTOR shall apply herbicide to control weed and other innocuous growth.

C. Selective Tree Removal and Trimming: Selective Tree Removal and Trimming, when indicated on Drawings, includes the removal of all trees six-inch caliper and less as measured 5 feet above grade and trees greater than six-inches as designated by the OWNER and marked in the field prior to bid. All remaining trees shall be limbed to a height of ten feet above grade. Where evergreen trees exist in the Select Clearing area, all existing evergreen trees shall remain.

1. Selective Tree Removal and Trimming shall be performed in a manner that does not damage existing trees or designated plant growth to remain.

2. Treat all exposed cuts of trees limbed as part of Selective Tree Removal and Trimming operations to prevent disease and insect damage.

D. Transplanting: Transplant all designated trees, shrubs, and other plant material in accordance with Section 02930.

E. Stump Removal:

1. Athletic Field Areas: Completely remove all stumps and root systems to a minimum of 18-inches below finished grade to the limit of the field playing area and any sideline area. Where subdrainage systems are required as part of the Work, remove all stumps and root systems to a depth of at least six inches below the invert of the drainage trench or aggregate drainage material. In no case shall the depth of removal be less than 18-inches below finished grade.

2. General Lawn Areas: Completely remove all stumps and root systems to a minimum depth of 6-inches below finished grade.

3. Select Clearing Areas: Cut stumps as close as possible to finish grade. If stumps cannot be cut to within 6-inches of finish grade, completely remove stump or grind to finish grade elevation.

4. Roadway, Paved, and Structural Areas: Completely remove all stumps and root systems.

5. Where existing stumps, portions of stumps, or root systems are permitted to remain, apply herbicide to inhibit future growth.

F. Disposal of Trees, Shrubs, and Brush: Remove all trees, shrubs, brush, and vegetated material waste resulting from clearing Work from Site. Where burning is permitted by local ordinance, CONTRACTOR may burn materials on-site.

G. Prior to burning materials on-site, review location of burn pit with ENGINEER and burning procedures. The burning pit shall not be located within five hundred feet of any occupied buildings or facilities, or greater distances as may be dictated by local ordinance, or within areas that will be paved or subject to backfill compaction required to support other site structures, building pads, or foundations.

## 3.5 SELECTIVE SITE DEMOLITION

A. See Section 024119.

## 3.6 TOPSOIL STRIPPING AND STOCKPILING

A. Topsoil stripping includes removal of the existing topsoil to a maximum depth of six inches from areas to be further excavated or regraded. Additional topsoil shall be removed from areas to receive fills as specified in Section 310000.

1. CONTRACTOR is permitted to strip topsoil deeper than six inches where greater depths are encountered and if such removal is needed to provide the required site topsoil volume. CONTRACTOR is responsible for providing any additional subsoil materials that may be required due to the removal of additional topsoil.

B. Do not mix in foreign materials or subsoil when excavating topsoil. Do not excavate wet topsoil.

C. Stockpile topsoil on-site and protect from erosion in accordance with the Erosion and Sediment Control Plan.

D. Remove excess soil not intended for reuse from the site.

## 3.7 CONTRACTOR PARKING, STAGING, STORAGE, AND FIELD OFFICES

A. Locate staging, storage and field offices as to avoid conflict with other operations. Locate as required to facilitate construction staging. Review location with ENGINEER prior to construction.

B. Locate staging, storage, and field office area to minimize interference with OWNER's use of site, existing site vehicular traffic, and pedestrian traffic.

C. Provide stabilized temporary base of aggregate paving as scheduled for CONTRACTOR parking, staging areas, and field offices to minimize site disturbance when these areas are not located on existing paved or otherwise stabilized areas.

D. Provide CONTRACTOR parking, staging, storage and field office area where indicated on the Drawings or as approved by the OWNER. Size of staging area is approximate and may be modified subject to conditions of the Work. Site area occupied by the CONTRACTOR shall not be utilized for any purpose unless specifically authorized by the OWNER.

E. Access: Access to construction parking, staging and storage areas shall only be at approved locations. Approved locations include those where access has been approved through a Highway Occupancy Permit approved by the Pennsylvania Department of Transportation or by the ENGINEER, and where a stabilized construction entrance has been indicated on the approved Erosion and Sediment Control Plan. CONTRACTOR shall coordinate access points and approvals prior to starting work.

**END OF SECTION**

# SECTION 024119 – SELECTIVE DEMOLITION

## PART 1 - GENERAL

### 1.1 DESCRIPTION

A. Work included: Carefully demolish and remove from the site all items scheduled to be so demolished and removed.

B. Related work:

1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions and Sections in Division 1 of these Specifications.

### 1.2 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the method needed for proper performance of the work of this Section.

## PART 2 – PRODUCTS

(No products are required in this Section).

## PART 3 - EXECUTION

### 3.1 SURFACE CONDITIONS

A. By careful study of the Contract Documents, determine the locations and extent of selective demolition to be performed. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

B. In company of the ENGINEER, visit the site and verify the extent and location of selective demolition required.

1. Carefully identify limits of selective demolition.
2. Mark interface surfaces as required to enable workmen also to identify items to be removed and items to be left in place intact.

C. Prepare and follow an organized plan for demolition and removal of items.

1. Shut off, cap, and otherwise protect existing public utility lines in accordance with the requirements of the public agency or utility having jurisdiction.
2. Completely remove items scheduled to be so demolished and removed, leaving surfaces clean, solid, and ready to receive new materials specified elsewhere.
3. In all activities, comply with pertinent regulations of governmental agencies having jurisdiction.

D. Demolished material shall be considered to be property of the CONTRACTOR, unless stated otherwise on the drawings as being reused/relocated elsewhere on the site, and shall be completely removed from the job site.

E. Use means necessary to prevent dust becoming a nuisance to the public, to neighbors, and to other work being performed on or near the site.

3.2 PERFORMANCE

A. General Requirements: The means and methods of performing demolition and removal operations are the sole responsibility of the CONTRACTOR. However, equipment used, and methods of demolition and removal will be subject to approval of the ENGINEER.

B. Equipment and Material Items Salvage: The OWNER shall have the right to claim as salvage any equipment and material items to be removed under the work of this Section. Should such right of salvage be exercised by the OWNER, move and neatly store removed items on the Site in a location agreeable to the OWNER, in a manner approved by the ENGINEER.

C. Removed Equipment and Material Items: Existing equipment and material items involved in the demolition work, which are not claimed as salvage by the OWNER, shall become the property of the CONTRACTOR, and may not be disposed of on the Site but removed and disposed of in a lawful manner, off site.

D. Debris Removal: Dispose of demolition debris off Site in a lawful manner. Containerize or otherwise store debris as work is in progress.

3.3 REPLACEMENTS

A. In the event of demolition of items not so scheduled to be demolished, promptly replace such items to the approval of the ENGINEER and at no additional cost to the OWNER.

**END OF SECTION**

# SECTION 310000 – EARTHWORK

## PART I GENERAL

### 1.1 SECTION INCLUDES

A. Protection of existing site structures, utilities, and property.

B. General filling and backfilling, including moisture control, compaction, testing and field quality control.

C. General excavating, including dewatering and rock removal.

D. Trench excavation for storm sewers for piped utilities.

E. Rough grading, placement of topsoil, and finished grading.

### 1.2 RELATED DOCUMENTS

Not Applicable.

### 1.3 COMPLIANCE WITH AUTHORITIES HAVING JURISDICTION

Not applicable.

### 1.4 REFERENCES

A. ASTM D1557 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort.

B. ASTM D698 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort.

C. ASTM D1556 – Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method

D. ASTM D2216 – Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass.

E. ASTM D2487 – Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)

F. ASTM D6938 – Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).

G. ASTM D4318 – Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

H. OSHA 29 CFR, Part 26, Subpart B – Construction Standards for Excavation.

### 1.5 PROTECTION AND RESTORATION OF PROPERTY AND UTILITIES

A. Existing walks, fences, roads, buildings, structures, and other site features in or adjacent to the Work shall be protected during by placing barricades, fencing, or other appropriate methods.

B. Operate all excavation equipment and other machinery to prevent damage to existing structures designated to remain and new construction.

C. Do not operate excavated equipment on existing or newly paved surfaces if the equipment will damage the pavement surface in anyway.

D. Protect from damage new pavement surfaces and existing pavement surfaces to remain as part of the Work during staging, storage, and material stockpiling operations.

E. Restore all lawns, paved surfaces, curbing, sidewalks, and other structures that are damaged by the CONTRACTOR's operations to a condition equal to or better than that they were prior to the beginning of the Work. Restoration work shall be completed immediately following observation of any damage or destruction unless further operations will result in additional damage.

F. Notify all utility companies, pipeline companies, and the OWNER to assist in determining the location and protection procedures for utility services and pipelines prior to construction.

1. Obtain and implement protection requirements for existing utilities as may be required by the utility company.

2. Underground utilities are located on the Drawings based upon field survey of surface appurtenances, OWNER's drawings, and in accordance with Act 187 of 1996, Pa One Call Design Serial Numbers as noted on the Project Drawings.

3. Utility information shown on the Drawings shall be considered approximate. As excavation approaches pipes, conduits, or other underground utilities, manual methods of excavating may be necessary. Notify ENGINEER where materials cannot be removed by manual or other methods.

G. Repair, replace, and pay all fines, fees, or penalties, for damage to any existing charted utility service. Utility services include phone, CATV, electric, gas, water, sanitary sewer, petroleum, process lines, storm sewers, and all other public and private utilities.

1. Definitions:

a. Charted Utility: All existing utility lines, either above ground or below ground, visible through surface appurtenances, shown on the Drawings, field delineated by the utility company, shown on existing utility company maps, or shown on existing drawings provided by the OWNER.

b. Uncharted Utility: Any existing utility lines not meeting the above requirements and discovered during excavation.

2. Immediately notify the ENGINEER and the utility company when uncharted, or incorrectly charted, piping, conduit, ducts, or utilities are encountered during excavation.

3. Cooperate with the OWNER and the utility company as required to maintain existing services and facilities in operation.

4. Upon discovery of an uncharted utility, the utility from that time forward shall be considered as a charted utility.

H. Immediately begin to make emergency repairs and notify the proper authorities if any existing piping, conduits, ducts, or utilities are damaged during the process of the excavation. Repair damaged utilities to the satisfaction of the utility OWNER and ENGINEER. Note and properly report all damage.

I. Excavate test pits to accurately determine the elevation and alignment of existing utility lines where Work will require crossing, excavation over, or connection to the utility line. Provide information to the ENGINEER a minimum of three days prior to commencing with the affected portion of the Work.

1.6 SUBSURFACE CONDITIONS

A. Perform Work regardless of the nature of subsurface materials encountered. Immediately notify the ENGINEER upon discovery of unnatural subsurface conditions, underground storage tanks, contaminated soils, organic soils, springs, or seeps, buried debris, stumps, or rubbish.

B. Unclassified Excavation: No consideration will be given to the nature of materials encountered during excavation. The base bid shall incorporate the removal and handling of all subsurface materials, including rock. Rock is defined as limestone, sandstone, granite or similar rocks in solid beds or masses in original or stratified position that cannot be dislodged by a D-8 Caterpillar tractor, or equivalent, equipped with a hydraulically operated power ripper (or by a CAT 235 hydraulic backhoe or equivalent) without the use of drilling and blasting, or pneumatic breaking using a 6 inch or larger ram attached to adequately sized equipment. Boulders or masses of rock exceeding one-half cubic yard in volume shall also be considered rock excavation.

1.7 SURVEY LINES AND MARKERS

A. Establish all baselines and survey control required for the Work. All existing property line markers, monuments, and control points shall be protected or replaced if dislodged. A professional licensed surveyor shall reset all disturbed or dislodged boundary markers. All known survey points, control points, benchmarks, and vertical control datum is indicated on the Drawings.

B. Verify that the survey benchmark and intended elevations for the Work are as indicated. Set additional horizontal and vertical control points as required for the Work.

1.8 COORDINATION

A. Coordinate all Work under the provisions of Section 011000 as to avoid conflict with other operations and OWNER's use of site.

1.9 PROJECT RECORD DOCUMENTS

A. Submit record documents under the provisions of Section 017700.

B. Accurately record actual locations of all utilities, including storm sewers, water lines, sanitary sewer lines, conduits, electric lines, phone lines, CATV lines, and transmission lines by horizontal location and elevation of inverts at all structures for storm sewer and sanitary sewer lines.

1.10 EXCAVATION CONDITION

A. Condition and results of excavation are solely the responsibility of CONTRACTOR. Remove slides and cave-ins at whatever time and circumstances such conditions occur. Excavation shall conform to the lines, grades, dimensions, and elevations indicated on the Drawings, and shall be in accordance with all applicable OSHA regulations. Repair any damage to site structures and improvements caused during excavation. Maintain the stability of excavated faces, including prevention of sloughing of material from excavated faces.

B. Protect site excavations from caving and soil movement. Wherever shoring and bracing is required, locate the system to clear permanent construction and permit forming and finishing of concrete surfaces or other construction. Assign supervision of shoring and bracing work to a qualified construction specialist.

C. Shoring systems retaining earth on which the support or stability of existing structures or new structures is dependent must be left in place at completion of Work. No additional consideration will be given for sheeting, shoring, and bracing left in place for the proper execution of the Work, or for the convenience of the CONTRACTOR.

1.11 PROPERTY OF MATERIALS AND EARTHWORK BALANCE

A. Excess Materials: No right of property in materials is granted for excavated materials prior to backfilling. Excess material shall be stockpiled at a location on the project site and stabilized in accordance with Erosion and Sediment Control Plan until such material is necessary to complete the Work. Excess or unsuitable soil material shall be immediately removed from the site.

1. Stockpile excess topsoil and subsoil in separate piles.

2. Soil materials stockpiled shall not include any large boulders or deleterious materials.

3. Boulders and deleterious material shall be segregated and stockpiled separately for disposition at the discretion of the OWNER.

B. Off-site Materials: Any imported soil material required to complete Work shall be furnished in accordance with Special Provisions - Materials and Methods.

C. Earthwork Balance: During the Bid Phase grade adjustments in non-building and non-paved areas of the site will be considered to assist in attaining an on-site earthwork balance.

## PART 2 PRODUCTS

2.1 SOIL MATERIALS

A. General Fill Materials: As specified in Special Provisions - Materials and Methods.

B. Select Clean Earth Fill: As specified in Special Provisions - Materials and Methods.

C. Clay: As specified in Special Provisions - Materials and Methods.

D. Topsoil: As specified in Special Provisions - Materials and Methods.

E. Imported Soil Materials: As specified in Special Provisions - Materials and Methods.

F. Engineered Backfill Materials: As specified on Contract Drawings

2.2 AGGREAGATE BACKFILL

A. First Class Bedding: Aggregate Type A-3 as specified in Special Provisions - Materials and Methods.

B. Initial Backfill: Aggregate Type A-4 as specified in Special Provisions - Materials and Methods.

2.3 GEOSYNTHETIC MATERIALS

A. Geotextiles: As specified in Special Provisions - Materials and Methods

B. Geogrids: As specified in Special Provisions - Materials and Methods.

2.4 COMPACTION EQUIPMENT

A. Provide suitable compaction equipment as required to perform the Work.

1. Bulk Structural Fill: Smooth-drum vibratory roller with a static weight of at least 24,000 pounds and a centrifugal force of at least 50,000 pounds and minimum 84-inch drum with, equal to a Hyster Hypac C850B or Ingersoll-Rand SD-100.

a. Structural Backfill and Trench Fill: Vibratory plate tampers such as a Wacker DPU 6055 or walk behind roller such as a Bomag BW-75AD roller. The use of Hydra-Hammer for compacting backfill in trenches, or other equipment that may dislodge pipe joints, is prohibited.

b. The use of puddling or jetting for compacting structural backfill or trench backfill prohibited.

2.5 WATER FOR COMPACTION

A. Provide water as required to adjust soil moisture content. On-site water facilities are not available for use construction purposes.

## PART 3 EXECUTION

3.1 GENERAL

A. Geotechnical Report: Not applicable.

3.2 PREPARATION

A. Verify structural ability of unsupported walls to support imposed loads of the fill. Verify subdrainage and foundation drainage systems are in place.

B. Identify required lines, levels, contours, datum locations, and benchmarks. Establish horizontal location and vertical grade control.

C. Stake and flag locations of known utilities. Maintain staking and flagging throughout construction.

D. Locate, identify, and protect utilities to remain from damage. Protect the existing utilities and structures, both above and below grade, from construction activity and vibration from heavy equipment.

1. Limit and control access across existing and newly installed utilities.

2. Designate selected cross-over areas.

3. Utilize hand operated equipment to compact fill areas over utilities. Compaction equipment should only be operated in the static mode.

E. Protect plant life, lawns, and other features designated to remain as a portion of final landscaping.

F. Protect benchmarks, survey control points, fences, sidewalks, paving, and curbs from excavation equipment and construction traffic.

3.3 GENERAL PROCEDURES

A. Erosion and sediment pollution controls shall be installed to intercept upslope runoff from areas to be disturbed prior to initiating earthmoving activities.

1. Install erosion and sediment controls in accordance with the Erosion and Sediment Control Plan. A copy of the approved plan shall be available on-site at all times.

2. Maintain erosion and sedimentation controls until the upslope contributing drainage area is stabilized.

B. Materials excavated from borrow areas or general excavation shall be stockpiled at on-site area as directed by ENGINEER if it cannot be immediately placed. When stockpiling is necessary, stockpiles shall be kept in a neat and well-drained condition and shall be stabilized in accordance with the Erosion and Sediment Control Plan.

C. Fugitive dust emissions shall be controlled by CONTRACTOR using commercially available dust inhibitors or by wetting down dry soil or aggregate surfaces. When using water as a dust control, verify that excess moisture will not alter or inhibit attaining required compaction densities.

## 3.4 FILLING AND BACKFILLING

A. Prior to filling and backfilling operations, prepare the subgrade to receive new fills.

1. The subgrade to receive compacted fill or aggregate base course shall be stripped of all topsoil prior to backfilling.

2. Proofroll all subgrade areas, at grade areas, and subgrades in cut areas prior to fill placement.

   a. Perform proofrolling under the observation of the ENGINEER.

   b. Proofroll using a loaded triaxel dump truck having a gross vehicle weight of at least 60,000 pounds as well as a vibratory roller.

   c. Buffer Zone: 10-feet beyond the structure footprint area and 5-feet beyond the edges of all parking areas, access drives, paved play areas, or structural slabs.

   d. Conduct proofrolling at the last practical moment before subbase is placed on exposed subgrades and again at the subbase level before slabs, pavements, or finished surfaces are placed.

3. Repair soft or unstable areas disclosed by proofrolling prior to placing new fills or pavement subbase.

   a. Over-excavate soft or unstable areas of subgrade until a stable base is reached.

   b. Remove unsuitable from site or place at non-structural fill locations approved by ENGINEER.

   c. Backfill excavation with AASHTO No. 57 coarse aggregate and compact to the required density.

   d. Backfill excavation with AASHTO No. 1 coarse aggregate where a perched water table exists or if a stable bearing area is not reached within three feet of the required subgrade level.

   e. On-site excavated rock material may be used where approved by a geotechnical engineer.

4. Seal exposed finished subgrade surfaces through compacting with a vibratory roller where subbase materials will not be immediately installed.

B. Filling:

1. Subgrade fill materials shall be placed in layers by a bulldozer or other method as determined by the CONTRACTOR. The entire surface of the work shall be maintained free of ruts and in a condition that will permit free drainage and travel of construction equipment.

2. All roots, debris, and stones exceeding the maximum particle size shall be removed from the fill areas that may create voids, result in poor compaction, or cause irregularities in the final surface.

3. Place fill material in 8-inch loose horizontal lifts.

4. Scarify the compacted surface of each lift prior to the placement of each successive lift.

5. Do not place frozen materials, fills in freezing temperatures, or when the ground is frozen.

6. Do not place fills on areas of ponded water, on wet ground where ponding is present, or during wet periods of inclement weather.

7. Fill Slope Construction: Slopes greater than or equal to a ratio of 3-feet horizontal to 1-foot vertical shall be constructed by excavating benches in the existing slope face.

    a. Locate and size benches to permit compaction of successive fills in uniform horizontal layers. Compaction along the face of the slope is not permitted.

8. Structural Backfilling Procedures:

    a. Do not place backfill material prior to seven days after completion of structural walls. Backfill against structural walls with Clean Earth Backfill only.

    b. Do not operate heavy equipment closer to walls than a distance equal to the height of backfill material above the top of the structure footing. Use only hand operated compaction equipment within ten feet of walls.

    c. Do not place backfill against exterior walls until supporting floors, other reinforcing members, or slabs at top of walls are in place. Provide Clean Earth Fill material and free draining Aggregate Backfill as scheduled on Structural Drawings against exterior building walls.

    d. Backfill to be compacted with hand-operated equipment shall not exceed four inches in loose, horizontal layers. Compact backfill around inlet boxes, manholes, and other storm sewer, sanitary sewer, or utility structures using hand operated equipment.

    e. The excavation shall be free of trash and debris prior to backfilling. Backfilling with frozen materials, during freezing temperatures, or when water is present or ponded in the excavation is not permitted.

    f. Employ methods to prevent damage to walls, foundation drainage, utilities, conduits, or piping during backfilling. Backfill by hand when required.

C. Moisture Control:

1. All fill and backfill materials shall be placed at a moisture content that is no more than 3-percentage points above or 3 percentage points below the optimum moisture content established for the material by ASTM D1557.

2. Aerate the fill and backfill materials to acceptable moisture content if the fill determined to be excessively wet. The drying process shall be assisted by harrowing where necessary.

3. Provide water with sprinkler tanks, water trucks, or other sprinkling devices to provide uniform distribution over the materials to be treated when additional moisture content is required.

4. Naturally Wet On-Site Soils:

a. April 1 – October 31: Air-dry wet soil material scheduled for fill or backfill that possess natural water contents a maximum of 8-percentage points above the material's optimum moisture content as specified by ASTM D1557 to within 3-percentage points of the optimum moisture content. Waste any soil material that exceeds 8-percentage points above the soil's optimum moisture content at non-structural fill locations or offsite and replace with suitable soil material.

b. November 1 – March 31: Remove soil material or place at non-structural fill areas where the natural water content is above 3-percentage points above the soil's optimum moisture content as determined by ASTM D1557. Replace with other suitable onsite material or import fill material required to meet the Work.

c. Protect stockpiled soil material in spoil piles from wet weather conditions. Soil materials that are unusable due to improper protection will not be considered as naturally wet on-site soils.

D. Compaction:

1. Soil placement and compaction shall conform to the lines, elevations, and contours on the Drawings.

2. Compact each lift using of vibratory rollers or vibratory plate compactors. Utilize overlapping passes when performing compaction with rollers. Recompact areas that are determined to be unstable or to have a non-uniform density.

3. Structural Fill: Compact to not less than 95 percent of the maximum dry density as determined by ASTM D1557, Modified Proctor. Moisture content of the compacted soil shall be within the range of (-3) to (+3) percent of optimum moisture in accordance with ASTM D1557.

4. Non-Structural Fill: Compact to not less than 90 percent of the maximum dry density as determined by ASTM D1557, Modified Proctor. Moisture content of the compacted soil shall be within the range of (-3) to (+3) percent of optimum moisture in accordance with ASTM D1557.

5. Areas inaccessible to vibratory roller compaction equipment shall be compacted with suitable vibratory plate tampers or walk behind vibratory rollers. Where hand-operated compaction equipment is used, uncompacted lift thickness shall not exceed 4-inches.

6. Previously placed or new materials shall be moistened by sprinkling, when required, to achieve proper bond and compaction. No compaction shall be done when materials are excessively wet.

7. ENGINEER or OWNER may halt filling operations and require additional compaction tests beyond the testing schedule. Areas found deficient based on testing results shall be recompacted.

8. OWNER's geotechnical engineering technician shall monitor all construction and placement of fills and materials for pavements and storm water detention structures.

E. Tests and Field Quality Control:

1. Section 014000 – Quality Control – Testing is required as directed by the ENGINEER.

2. Testing: Test reports shall include field density, optimum moisture content, field observation conditions, actual unconfined compressive strength and or bearing tests according to methods referenced.

   a. Testing laboratory shall furnish both ENGINEER and CONTRACTOR with required copies of test reports. Same reports will be considered as sufficient evidence of acceptance or rejection of Work.

3. The optimum moisture content and the maximum density of each type of material used for compacted fill shall be determined by ASTM D1557, Modified Proctor Compaction Test.

4. Nuclear density testing devices shall be checked and calibrated regularly as per the manufacturer's recommendations, and the results will be checked and verified with ASTM D6938 at least once for every twenty nuclear densometer tests.

5. The minimum number of tests to be performed in each lift of fill or backfill shall be as scheduled.

   a. Structural Areas: One test for each 5,000 square feet of fraction thereof of bulk structural fill.

   b. Non-Structural Areas: One test for each 7,500 square feet or fraction thereof.

   c. Utility Trench or Wall Backfill: One test per each 50 lineal feet of trench backfill.

6. The ENGINEER will select test locations on a random basis.

7. When test results indicate that compaction density or moisture content is not as specified, the material shall be reworked and recompacted or removed, or replaced and

recompacted by to meet specified requirements. All areas requiring recompaction shall be retested to ensure conformance with the specification requirements.

## 3.5 EXCAVATION

A. Excavating Procedures:

1. Prepare and protect of existing structures as part of excavation.

2. Underpin adjacent structures that may be damaged by excavating Work.

3. Proofroll subgrade of excavated areas to receive subbase for finish pavements or slabs on grade are finished subgrade elevation is approached to identify soft spots or unsuitable bearing materials. Remove unstable bearing materials disclosed as part of proofrolling.

4. Do not interfere with 45-degree bearing spay of foundations.

5. Grade top perimeter of excavation to prevent surface water from draining into excavation.

6. Hand trim excavations. Remove loose matter.

7. Remove lumped subsoil, boulders, and rock up to 1/3 cubic yard measured by volume.

8. Notify ENGINEER of unexpected subsurface conditions and discontinue affected Work in area until authorized to continue.

9. Correct areas over excavated.

B. Protection:

1. Prevent displacement or loose soil from falling into excavation and maintain soil stability.

2. Provide fences and barricades around open excavations.

3. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing. All frozen material must be removed from the compacted fill or subgrade surface prior to placement of any new soil fill or aggregate base course.

C. Field Quality Control: Provide for visual inspection of all bearing surfaces. OWNERs representative shall perform field-testing and inspection for all structural areas of subgrade, established through excavating, filling, or through combination.

D. Dewatering:

1. Provide and maintain at all times during the Work, ample means and devices with which to remove promptly, and properly dispose of, all water entering trenches and other excavations, or water that may flow along or across work site.

a. Water shall be removed in a manner to minimize the transportation of sediments. Excavations shall be pumped dry prior to placement or construction of materials or structures within the excavation.
b. Remove temporary means of redirecting surface drainage only after the excavation has been backfilled.

2. All storm water pumped or drained from the Work area shall be directed to an erosion and sediment control trapping device, or an inlet that is directed to a sediment basin or sediment trap. Pumped water shall not be discharged directly to pavements, newly graded or seeded areas, swales, or off-site areas.

E. Rock Removal:

1. Rock is defined as limestone, sandstone, granite or similar rocks in solid beds or masses in original or stratified position that cannot be dislodged by a D-8 Caterpillar tractor, or equivalent, equipped with a hydraulically operated power ripper (or by a CAT 235 hydraulic backhoe or equivalent) without the use of drilling and blasting, or pneumatic breaking using a 6 inch or larger ram attached to adequately sized equipment. Boulders or masses of rock exceeding one-half cubic yard in volume shall also be considered rock excavation.

2. Material which can be loosened with a pick, frozen materials, soft laminated shale and hardpan, which for convenience or economy is loosened by drilling, blasting, wedging, or the use of pneumatic tools, removal of concrete pavement and retaining walls shall not be classified as rock removal.

3. Rock removal is defined as any rock, as defined above, that is dislodged and moved from its original or stratified position.

4. No consideration shall be given to the nature of materials encountered in excavation operations. All excavation is considered unclassified.

5. When rock is uncovered requiring explosive for removal, notify the ENGINEER. Removal of rock by explosives is permitted only when approved by authorities having jurisdiction and the ENGINEER. Removal by use of explosive methods will be considered only after all other methods have failed. CONTRACTOR shall be responsible for conforming to all codes, regulations, and obtaining all permits required for blasting.

6. Prior to removing rock by explosive means, the CONTRACTOR shall document existing conditions of nearby structures. CONTRACTOR shall be responsible for all damages to existing on-site or off-site structures, pavements, site features, and Work in progress.

7. Rock shall be removed to a depth and configuration to permit scheduled backfill for utility trenches and other excavation. Cut away rock at bottom of excavations to form level bearing surface. Removed shaled layers to provide a sound unshattered base where required for footings and foundations.

8. In areas to receive topsoil, remove rock a minimum of 18-inches below finished grade to permit placement of earth fill and topsoil over rock layer.

9. Fill over excavated areas, cavities, and voids at subgrade elevation in rock excavation with lean concrete or other material approved by the ENGINEER.

3.6 TRENCHING

A. General Trench Excavation: Perform excavation and backfilling using machinery. Hand excavation and backfilling may be required to protect existing structures, utilities, and other structures or when hand excavation or backfilling is specified. General trench excavation procedures include:

1. Begin excavation in trenches at the control point having the lower invert and proceed upgrade.

2. Remove soil and surface materials over the line of trenches and properly separate and store removed materials as suitable for use in backfilling or other purposes.

3. Remove subsurface materials to the subgrade elevation and separate and store removed materials as suitable for use in backfilling or other purposes.

4. Remove rock to subgrade at least 25 feet in advance of pipe laying.

5. Remove rock below subgrade if shattered due to rock removal operations. Restore subgrade of trench where over-blasting or excavation occurs.

6. Remove and dispose of unsuitable backfill materials.

B. Trenching:

1. From subgrade elevation to at least twelve (12) inches above the top of the outside barrel of the pipe, excavate trench banks to vertical lines not less than the minimum nor more than the maximum widths indicated in Trench Width Table (A). Where sheeting is required, the dimensions in the Table shall apply to the inside face of sheeting.

Trench Width Table (A)

| Pipe Diameter | Minimum[1] | Maximum[1] |
|---|---|---|
| 4” – 24” | 12” | 16” |
| 27” – 36” | 20” | 24” |
| 42” – 72” | 26” | 30” |
| >72” | 30” | 36” |

[1]Trench widths are outside diameter of pipe plus dimension in table.

2. From a point twelve (12) inches above the top of the outside barrel of the pipe, keep banks vertical for trenches made in paved or unpaved roadways. In no case, shall the trench width at the top exceed the dimensions in Trench Width Table (B). When the excavation limits of Table (B) cannot be held, install temporary shoring, sheeting, and bracing.

Trench Width Table (B)

| Pipe Diameter | Maximum[1] |
|---|---|
| 4” – 24” | 40” |
| 27” – 36” | 42” |
| 42” – 72” | 48” |
| >72” | 60” |

[1]Trench width is to outside diameter of pipe plus dimension in table.

3. Where utility trenches are excavated in rights-of-way or easements through open lands, the maximum top of trench width indicated in Trench Width Table (B) may be exceeded only if the Work can be completed without damaging or utilizing the adjoining property in execution of the Work. The angle of excavation for the trench wall may vary, but in no case shall the angle of excavation be steeper than one-half foot horizontal to one-foot vertical.

4. The dimensions indicated in Trench Width Table (B) may be waived by the ENGINEER for all trench excavations on OWNER’s property. No consideration is given for additional backfilling or excavation as a result of over-excavated trenches or laying back trenches for convenience in not supplying shoring, sheeting, and bracing.

5. All trenching shall conform to OSHA excavation standards, 29 CFR, Part 1926, Subpart B.

6. Length of Open Trench: ENGINEER shall have the right to limit the amount of trench opened in advance of pipe laying and the amount of pipe laid in advance of backfilling. In no case, shall these lengths exceed 300 feet and 100 feet respectively. Complete trench excavation at least twenty-five feet in advance of pipe laying and keep trenches free of obstructions. At the end of each workday, or discontinuing the Work, the pipe laying may be completed to within five feet of the end of the open trench. Additional open trench limitations are as follows:

   a. ENGINEER may require trench backfilling over completed utility lines or excavations in advance of the lengths to facilitate OWNER’s use of property or other reasons.

   b. If trench excavation is stopped, except as required by ENGINEER, and the excavation left open, ENGINEER may require trench to be backfilled.

C. Trench Backfilling:

1. Storm Sewers: Perform trench backfilling in accordance with Section 02213.

2. Compaction and Field Quality Control: During the course of trench backfilling and compaction, ENGINEER may, at various locations or depths of trenches, have density tests performed to verify compaction. Compact trench backfill as specified in the Sections pertaining to utility pipe installation and storm sewer installation.

## 3.7 ROUGH GRADING

A. Establish subgrades and final grades as shown on the Drawings. Where subgrade or final grade cannot be prepared to the elevations indicated on the Drawings, and through no fault of

CONTRACTOR or due to the nature of materials encountered that are included as classified excavation, a modification of grade will be permitted where it does not affect the overall design concept or void any approvals received for the Plan. Grade modifications will only be approved upon review of a Revised Grading Plan prepared by the CONTRACTOR and only after authorization by the OWNER.

B. Perform rough grading operations in a manner that maintains positive drainage, directs sediment laden flows to sediment trapping facilities, and does not create concentrated flows or discharges to adjoining properties.

C. Rough grading shall be done by mechanized equipment, such as a bulldozer, or other means as determined by the CONTRACTOR to form the desired line, shape, contour, and grade of the Drawings. Areas adjacent to structures and areas inaccessible to heavy grading equipment shall be graded using smaller excavation equipment, such as a skid loader, or graded by manual methods.

D. Slope grades away from building and open excavations at all times. Maintain positive drainage where indicated. Keep areas free of ruts and troughs that will trap and pond surface drainage.

E. Maintain erosion and sediment controls at all times and conform to approved Erosion and Sediment Control Plan and NPDES Permit requirements. Install additional controls when directed by the County Conservation District or when deemed necessary due to unanticipated site or weather conditions. Pay all fines or penalties levied by the DEP or Conservation District for failure to take corrective action on erosion and sedimentation pollution control deficiencies.

F. Make all grade changes gradual. Blend slopes into level areas.

G. Construct surface drainage channels and swales to meet minimum cross-sectional and slope requirements as scheduled on Drawings. Blend channels with adjacent grades. Grade channel invert, excluding "V" shaped channels, to convey flows evenly through channel cross-section. Install velocity checks, stone berms, and other means as necessary to prevent excessive erosion of channel. Provide additional controls beyond those shown on the Erosion and Sediment Control Plan when deemed necessary.

H. Tolerance: Finished subgrade within two-tenths of a foot (0.20' or 2-1/2") of required design subgrade elevation for non-structural areas and one-tenth of a foot (0.10') for structural areas.

## 3.8 LANDSCAPE/FINISH GRADING

A. Substrate Preparation: Eliminate low spots and uneven areas. Remove all stones, roots, brush, wire, stakes, and other debris greater than ½-inch in size. Remove all soil in subgrade contaminated with hydraulic fluids, chemicals, oils, or other material that could inhibit plant growth. Where the subgrade soil has developed volunteer weed growth, remove all weeds prior to topsoil placement using methods that will not affect fertility of the topsoil.

B. Lightly scarify subgrade surface for all areas to receive four inches or more of topsoil.

C. Scarify or till subgrade surface to a minimum depth of three-inches for all areas to receive less than four-inches of topsoil.

D. Placing Topsoil: Subject to the requirements of Special Provisions - Materials and Methods, topsoil stripped from site shall be acceptable for placement and finish grading. Amend topsoil in accordance with soil test recommendations as part of spreading and tilling operations. Place topsoil as follows:

   1. General Lawn Areas: Place topsoil to a minimum depth of 4-inches after light rolling.

E. Place topsoil during dry weather. Do not place or spread frozen or wet topsoil. Permit topsoil to dry when excessively wet prior to spreading and fine grading.

F. Incorporating Amendments: Incorporate amendments as required by soil test results and as specified in Section 329200 by tilling into topsoil. Thoroughly and uniformly distribute amendments in the upper three inches of the topsoil.

G. Fine grade topsoil to eliminate rough or low areas. Maintain profile and contour of subgrade. Place topsoil to within ½-inch of finished surface of sidewalks, slabs, paved areas, and top of curb unless otherwise indicated on Drawings. Remove rocks, weeds, and foreign materials when spreading topsoil.

H. General lawn areas shall be raked to remove all stones and debris greater than ¾-inch in any dimension. Conservation seeded areas shall be raked to remove all stones and debris greater than 1-inch in any dimension and that will otherwise interfere with seeding operations.

I. Manually spread topsoil close to plant materials, buildings, site structures, exposed subdrainage systems, areas backfilled with infield mix or similar materials to prevent damage and mixing of topsoil with other materials.

J. Lightly compact placed topsoil.

K. Tolerances: Finished grade of topsoil shall be within ½-inch of finished design grade.

L. Leave stockpile area clean and raked, ready to receive final landscaping. If excess topsoil was stockpiles, grade topsoil pile to form regular, even side slopes and stabilize as part of final seeding.

M. Do not permit construction traffic on newly placed topsoil to prevent unnecessary compaction. Use only rubber-tired agricultural style equipment for fine grading and finished spreading of topsoil.

**END OF SECTION**

# SECTION 321200 – FLEXIBLE PAVEMENT

## PART 1 GENERAL

1.1 Section Includes

A. Bituminous paving for site roadways, parking areas, and service areas.

B. Bituminous pavement joint sealant.

C. Pavement repair.

1.2 References

A. The PennDOT Sections noted herein refer to sections contained in the Commonwealth of Pennsylvania Department of Transportation Specifications Publication 408, latest edition. The referenced pertain only to materials, construction equipment, methods and labor. The payment provisions do not apply to work performed under this Contract.

1.3 Submittals

A. Certificates: Furnish certification from bituminous and aggregate producer attesting that materials conform to PennDOT Specifications.

B. Material Slips: Furnish certification of the amount of materials utilized from the producer according to PennDOT Specifications.

1.4 Quality Assurance

A. Perform Work in accordance with PennDOT Publication 408, latest revision.

B. Mixing Plant: Approved by latest PennDOT bulletin for bituminous materials.

C. Obtain materials from same source throughout.

1.5 Environmental Requirements

A. Do not place asphalt when ambient air temperature or base surface temperature is less than 40 degrees or surface is wet or frozen.

B. Place bitum mixture when temperature is not more than 15 degrees below bitumen supplier's bill of lading and not more than the maximum specified temperature.

1.6 Coordination

A. Not used.

## PART 2 PRODUCTS

2.1 Materials

A. Aggregate Base Course

1. Coarse Dense Graded Aggregate: Aggregate Type A-1 as specified in Section 321100.

B. Bituminous concrete and bituminous materials shall meet the requirements of PennDOT Publication 408, latest revision.

1. Asphaltic cement: PG64S-22, conforming to PennDOT Publication 408, latest revision.

2. Bituminous Concrete Base Course: Superpave Asphalt Mixture Design, Base Course, PG64S-22, 25.0 mm mix, ESAL's and installation depth as specified on Contract Drawings.

3. Bituminous Concrete Binder Course: Superpave Asphalt Mixture Design, Binder Course, PG64S-22, 19.0 mm mix, ESAL's and installation depth as specified on Contract Drawings.

4. Bituminous Concrete Binder Course: Superpave Asphalt Mixture Design, Binder Course, PG64S-22, 25.0 mm mix, ESAL's and installation depth as specified on Contract Drawings.

5. Bituminous Concrete Wearing Course: Superpave Asphalt Mixture Design, Wearing Course, PG64S-22 or PG64S-22, 9.5 mm mix, ESAL's and installation depth as specified on Contract Drawings, SRL-Any.

6. Bituminous Concrete Wearing Course: Superpave Asphalt Mixture Design, Wearing Course, PG64S-22 or PG64S-22, 12.5 mm mix, ESAL's and installation depth as specified on Contract Drawings, SRL-Any.

7. Bituminous Concrete Wearing Course: Superpave Asphalt Mixture Design, Wearing Course, PG64S-22 or PG64S-22, 19.0 mm mix, ESAL's and installation depth as specified on Contract Drawings, SRL-Any.

8. Leveling/Scratch Course: Superpave Asphalt Mixture Design, Wearing Course, PG64E-22 or PG64S-22, 9.5 mm mix, Varying Depth – ½" average, SRL-Any, ESAL's as specified on Contract Drawings.

9. Asphalt tack coat: Emulsified asphalt, conforming to PennDOT Publication 408, Section 460.2.

10. Asphalt prime coat: Emulsified asphalt, conforming to PennDOT Publication 408, Section 461.2.

C. Bituminous Pavement Joint Sealant.

1. Pavement cracks/joints greater than ¼ inch: Single component, hot-pour asphalt based pavement crack and joint sealant meeting ASTM D6690, and AASHTO M324, Roadsaver 221, as manufactured by Crafco, Inc. (1-800-528-8242) or approved equal.

2. Curb joints: Emulsified asphalt, PG64S-22, conforming to PennDOT Publication 408. Do not seal curb joints prior to painting curb, where indicated.

D. Sealer

1. If specified on Contract Drawings, provide a sealer consisting of suitable fibrated chemical type asphalt base binders and fillers having a container consistency suitable for troweling after thorough stirring, and containing no clay or other deleterious substance.

2. Where conflicts arise between this specification and the requirements in the latest version of the PennDOT Specifications, Publication 408, latest revision, the State Specifications shall control.

E. Pavement Markings: PennDOT Publication 408, Sections 960 to 966.

## 2.2 PAVEMENT MIXES

A. Composition of Mixtures: Base, binder and wearing course mixture composition shall conform to requirements of PennDOT Publication 408, Sections 313 and 400.

1. Establish a job-mix formula prior to beginning work, which shall not be changed during the progress of work without the ENGINEER's approval. Job mixing tolerances shall not be presumed to permit acceptance of materials whose gradations fall outside the master ranges set in the specified PennDOT sections.

2. The approved job-mix formula shall lie within the specification limits and be suitable for the layer thickness and other conditions prevailing. It shall not be changed after work has started without the approval of ENGINEER.

## PART 3 EXECUTION

3.1 Examination

A. Verify that compacted subgrade is dry and ready to support paving and imposed loads.

B. Verify gradients and elevations of subgrade are correct.

3.2 Aggregate Base Course

A. As specified in Section 321215.

3.3 Preparation – Prime Coat

A. Apply prime coat in accordance with PennDOT Publication 408, 461.3.

3.4 Preparation – Tack Coat

A. Apply tack coat over existing surface in accordance with PennDOT Publication 408, Section 460.3.

3.5 Placing Pavement

A. Place base course in accordance with PennDOT Publication 408, Section 313. Place bituminous binder and wearing courses in accordance with PennDOT Publication 408, Section 400. Do not place final wearing course until directed by ENGINEER. Place preceding pavement courses as early as possible in the phasing schedule to provide temporary paving during construction.

B. Place pavement to the compacted thickness indicated.

C. Seal all joints at all curbs and storm water structures where the final wearing course will not be installed for more than 45 days.

D. Neatly sawcut at all edges between new pavement and existing pavement to remain.

3.6 Pavement Markings

A. All pavement markings, locations, symbols, colors and sizes shall conform to PennDOT publication 408 and PA Code 67 standards. All parking stalls and painted islands shall be located as indicated on the Drawings.

B. All markings and striping shall be of the material specified. Apply paint material

in accordance with the manufacturer's specifications, including pavement surface cleaning and preparation.

C. Protect all pavement markings until material has completely cured. Damaged markings must be completely removed and reapplied.

3.7 Bituminous Pavement Repair

A. Seal all isolated joints with pavement joint and crack sealant as specified. Sawcut and remove pavement and subbase at areas of reflective cracking caused by construction traffic or deficient Work that will not support required final loading. Recompact the subgrade to the specified density. Proofroll subgrade and remove any soft spots in accordance with Section 310000. Place and compact subbase aggregate and bituminous pavement materials as specified. Reflective cracking may be addressed prior to the placement of overlay paving with heavy duty membranes in accordance with PennDOT Publication 408, Section 467 when approved by the ENGINEER after review with the geotechnical consultant.

3.8 Application of Seal Coat

A. Prepare the surfaces, mix the seal coat material, and apply in accordance with the manufacturer's recommendations as approved by the ENGINEER.

B. Apply one coat of the specified sealer.

C. Achieve a finished surface seal which, when dry and thoroughly set, is smooth, tough, resilient, of uniform black color, and free from coarse textured areas, lap marks, ridges, and other surface irregularities.

3.9 Field Quality Control

A. Pavement Coring (As deemed necessary by ENGINEER): For each pavement section specified at each area on the Drawings, provide one (1) core sample to verify pavement thickness. Backfill, compact and seal test holes after the measurements have been performed. Pavement more than ¼ inch deficient in depth and cannot be satisfactorily corrected will be considered defective. When defective pavement is encountered, additional core holes will be required to determine the extent of the deficient area. All defective pavement shall be replaced to conform to the required cross-section.

3.10 Tolerances

A. Flatness: Maximum variation of ¼ inch measured with a 10 foot straight edge in any direction.

B. Scheduled compacted thickness: Within ¼ inch.

C. Variation from finished grade: Within ½ inch.

3.11 Schedule

A. All pavement cross-sections and limits of paving are scheduled on the Contract Drawings.

END OF SECTION

# SECTION 329200 – TURF AND GRASSES

## PART 1 GENERAL

### 1.1 SECTION INCLUDES

A. Amending Topsoil.

B. Seeding and Mulching.

C. Sodding.

D. Maintenance.

### 1.2 RELATED SECTIONS

A. Special Provisions - Basic Site Materials and Methods

B. Section 022900 – Site Preparation

C. Section 310000 – Earthwork

### 1.3 RELATED DOCUMENTS

A. Erosion and Sediment Control Narrative and Erosion and Sediment Control Plan: Requirements for temporary seeding, permanent stabilization, site stabilization during construction as approved by the County Conservation District and the Department of Environmental Protection as it relates to the requirements of the NPDES Permit and PADEP Chapter 102 Regulations.

### 1.4 DEFINITIONS

A. Weeds: Include Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Blackberry, Tansy Ragwort, Bermuda Grass, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Sorrel, and Brome Grass.

B. Erosion and Sediment Control Plan: Includes all plans, narratives, calculations, and conditions of the NPDES Permit, as applicable, as approved and issued by the County Conservation District and Pennsylvania Department of Environmental Protection. A copy of the approved plans and permit must be available on-site at all times during construction.

### 1.5 STANDARDS

A. All seed varieties contained in the seed mixtures shall be certified seed by the state where the seed was manufactured.

B. All chemical applications shall be performed in accordance with local, state, and federal regulations utilizing EPA registered materials and methods of application. All chemical applications shall be performed under the supervision of a Licensed Certified Applicator.

1.6 SUBMITTALS

A. Manufacturer's Certified Analysis: Submit manufacturer's certified analysis for each seed mix showing percentage of each variety in mix, percent pure live seed, net weight by variety in mix, age of seed, and date of production.

B. Soil Amendments and Turf Establishment Program: Based on soil test reports, prepare and submit a schedule of soil amendments and fertilization required for each seed mix, time and method of application, a schedule indicating when areas will be seeded, anticipated dates of Substantial Completion, fertilization practices during establishment, application of pre-emergent and post emergent herbicides, and other practices that will be employed as part of the Work. The submittal will be considered by the ENGINEER for informational purposes only since the Work of this Section is evaluated by the final establishment of the lawn at the end of the warranty period.

C. Product Data: Submit product data, manufacturer's installation instructions, specifications, and catalog cuts.

1.7 SUBSTITUTIONS

A. Pre-bid: The CONTRACTOR shall make every reasonable effort to find the seed varieties and materials specified. Make recommendations for substitutions if desired seed mix or variety is unavailable, or, in the CONTRACTOR's opinion, unsuitable for the site, location to be planted, or other reasons that may result in the failure successfully establish. Notify the ENGINEER if disease resistant or insect resistant species can be substituted for the selected pest-prone species or variety.

B. Post-Bid: Requests for substitutions following bid shall be approved by the ENGINEER. CONTRACTOR shall submit request in writing, state the reasons for the substitution, and state the variety or mix to be substituted.

1.8 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in seeding, turf establishment, and maintenance with five years documented experience.

1.9 COORDINATION

A. The CONTRACTOR shall coordinate and schedule Work to permit seeding to occur during regular planting seasons.

1. General lawn areas and conservation or low maintenance areas shall be seeding during the spring or fall planting seasons.

2. Athletic field areas shall be seeded during the late summer/fall planting season. CONTRACTOR shall provide daily irrigation as required to maintain soil in a moist condition to prevent seed from drying out.

B. Coordinate Work under provisions of Section 011000 so as to avoid conflict with other operations. CONTRACTOR shall be responsible for reseeding any areas damaged due to a failure to coordinate or schedule construction activities.

C. Notify OWNER a minimum of three days in advance of all maintenance work including fertilizing, reseeding, over-seeding, and application of herbicides following initial seeding through substantial completion.

1.10 PLANTING SEASONS

A. Spring: The spring seeding season is March 15 to May 30. Spring seeding shall be conducted during this period unless approved by the ENGINEER to begin seeding earlier or perform summer seeding. No seeding shall be done on frozen ground, when the air temperature is less than 32-degrees farenheit, or when the soil temperature is less than 50-degrees Fahrenheit regardless of the date of seeding.

B. Fall: The fall seeding season is August 30 to October 30. Fall seeding shall be conducted during this period unless approved by the ENGINEER to perform seeding earlier or to perform late fall seeding. No seeding shall be done on frozen ground, when the air temperature is less than 32 degrees Fahrenheit, or when the soil temperature is less than 50-degrees Fahrenheit regardless of the date of seeding.

C. Optimal: The optimal seeding season is in the fall, from August 30 to October 15. More rapid germination will occur for most seed varieties when the soil temperature is between sixty- and seventy-degrees Fahrenheit.

1.11 INSPECTION AND ACCEPTANCE

A. Inspection: Upon completion of the Work as defined in Paragraph 1.13.A, or completion of contiguous areas equal to at least twenty-five percent of the total area of seeding, the CONTRACTOR may request an inspection to determine substantial completion. Request shall be made to the ENGINEER in writing and ENGINEER shall complete inspection within two weeks of receipt of request for inspection. CONTRACTOR shall clearly note in request for inspection which areas are substantially complete if not requesting inspection for the entire installation.

1. ENGINEER shall issue a notice of Substantial Completion following inspection where Work is substantially in conformance with the specified requirements and Drawings. Minor deficiencies shall be noted and CONTRACTOR shall correct all deficiencies within two-weeks of receiving notice.

2. Where ENGINEER determines that Work is not substantially complete due to significant deficiencies, CONTRACTOR shall take immediate corrective action. Upon completion of corrective measures, CONTRACTOR shall again request inspection to determine if Substantial Completion has been obtained.

B. Perform all maintenance activities required as part of Substantial Completion described in Paragraph 1.13.B prior to requesting inspection.

1.12 WARRANTY

A. Approval of the ENGINEER to perform seeding Work outside of the regular planting seasons when requested by the CONTRACTOR shall not void the warranty in any way. Requests by the OWNER to perform seeding outside of the regular seeding seasons shall alleviate the CONTRACTOR from providing warranty for failure of germination due to unsuitable soil temperature conditions, frost kill, or dormancy due to drought conditions.

B. CONTRACTOR shall for a period of one year from the Date of Substantial Completion, rebuild, repair, or replace any areas of lawn that have proven defective due to failure to comply with the Specifications in any way. The CONTRACTOR shall return and repair any defects detected during the winter season by May 15 of the following year. CONTRACTOR is not responsible for unsatisfactory areas of lawn due to vandalism, areas that have been damaged by the OWNER or OWNER's use, or as a result of the OWNER's failure to execute maintenance procedures following completion of the CONTRACTOR's maintenance period.

1.13 MAINTENANCE SERVICE

A. Maintain seeded areas immediately after placement until grass is well established. CONTRACTOR shall be responsible for maintenance of all seeded areas until a vigorous, weed free, healthy growing condition is present and Substantial Completion is established. A request for inspection for Substantial Completion will not be considered by the ENGINEER until a vigorous uniform growth over at least 90% of the seeded area is present.

B. When seeding is requested by the CONTRACTOR outside of the scheduled planting seasons, the CONTRACTOR shall perform additional maintenance, provide additional mulch, frost protection blanket, compost, increased seeding rate, over-seeding, and other Work as required to improve germination conditions.

C. When seeding is requested by the OWNER outside of the scheduled planting seasons, the CONTRACTOR shall perform additional maintenance, provide additional mulch, frost protection blankets, compost, increased seeding rate, over seeding, and other Work as required to improve germination conditions. Additional Work required to improve germination conditions will constitute an adjustment to the Contract only upon approval by the ENGINEER.

## PART 2 PRODUCTS

2.1 TOPSOIL

A. On-site available topsoil or approved imported topsoil as specified in Special Provisions - Basic Site Materials and Methods. The CONTRACTOR shall be responsible for providing satisfactory topsoil as required to meet the quantities necessary for the Work.

B. Soil Testing: Soil tests shall be done prior seeding. The soil test shall include a mechanical analysis to determine soil texture, pH, magnesium, phosphorus, and potassium. Testing shall also measure organic matter and soluble salts. The minimum number of soil tests shall be as specified in Special Provisions - Basic Site Materials and Methods. Topsoil shall not be tested until it has been stripped and stockpiled. All imported topsoil shall be approved by the ENGINEER before the material is delivered to the site.

C. Soil Amendments: CONTRACTOR shall amend topsoil as determined by the soil tests to adjust soil conditions as require for each variety and species of grass. Soil adjustments shall be made based upon the dominant variety in the seed mix. Where soil tests indicate soil is suitable as tested, no additional amendments are required. CONTRACTOR is not required to correct topsoil conditions beyond soil reaction (pH) and fertility (fertilizer). CONTRACTOR shall immediately notify ENGINEER where unusual topsoil conditions are present that will be harmful to germination.

1. CONTRACTOR is not required to adjust soil pH by more than 1.5 points. Topsoil required to be adjusted by more than 1.5 points shall be considered an unusual soil condition and additional amendments shall be provided where authorized by an approved Change Order.

2. The presence of unusual soil conditions affecting fertility, germination, high or low organic content, soil compaction, or similar conditions does not alleviate the CONTRACTOR of responsibility to provide suitable growing and germination conditions. Where unusual soil conditions are identified through soil testing, or during the execution of the Work, CONTRACTOR shall immediately notify ENGINEER and propose measures to address deficient soil conditions. Additional Work shall only be performed when approved by Change Order.

D. All topsoil shall be free of stones, lumps, plants, roots, and other debris over 1-1/2-inches. Topsoil shall be free of weeds, weed seeds, and toxic substances, such as pesticides, that are harmful to plant growth.

2.2 FERTILIZER

A. All fertilizer shall be uniform in composition, free flowing and suitable for application by mechanical spreaders. Fertilizers shall be delivered in sealed containers showing percentage by weight of all components and shall bear the name, trade name, and warranty of the producer. Application shall be per soil test and as described by CONTRACTOR under the provisions of Paragraph 1.6.C.

2.3 LIME

A. Lime material shall be ground or pulverized limestone that contains at least 50-percent total oxides, calcium oxide plus magnesium oxide. Limestone shall be ground to such fineness that at least 50-percent will pass through a 100-mesh sieve and not less than 98-percent will pass through a 20-mesh sieve. Granular or pelletized lime may also be used subject to the requirements for pulverized limestone. Application shall be per soil test and as described by CONTRACTOR under the provisions of Paragraph 1.6.C.

2.4 ORGANIC MATTER

A. Peat Moss: Type 1 sphagnum peat moss, finely divided with pH of 3.1 - 5.0.

B. Sedge Peat: Decomposed peat containing no identifiable fibers.

C. Leaf Compost: Screened and free of trash.

D. Composted Sewage Sludge: Screened, polymer-dewatered sewage sludge with a pH of 6.2 - 7.2.

E. Paper Mill Sludge: Screened, natural-dewatered paper mill sludge with a pH range of 6.8 - 8.0.

F. Municipal Solid Waste: Compost with pH 6.2 - 7.2 that is screened and contains less than 1-percent man-made materials.

2.5 SEED MIX

A. Seed Mixture: Provide seed mixtures in accordance with the seed schedule provided on the contract drawings.

B. Apply all seed mixtures at half-rates in two cross-directions.

2.6 SOD MIX

A. Provide sod having the same proportion of varieties as indicated for the seed mix for the area in which the sod is to be installed.

B. Provide only state-approved sod.

C. Provide machine cut sod with maximum deviation from width and length being 5-percent. Broken pads and torn or uneven ends are not acceptable.

D. Do not provide sod that has been harvested or transplanted under drought conditions.

E. Sod shall be harvested, delivered, and installed within a period of 36 hours.

2.7 MULCHING MATERIALS

A. Straw: Free of rot, mildew, noxious weed seeds and shall be small-grained, such as wheat or barley. Apply at a rate to lightly cover soil, approximately three (3) tons per acre.

B. Cellulose Fiber: Specially prepared cellulose processed into a uniform fibrous physical state. The fiber mulch, including dye, shall not contain germination or growth inhibiting factors. The material shall be manufactured and processed in such a manner that the cellulose fiber mulch will remain uniform in suspension in water under agitation and will blend with seed, fertilizer, and other additives to form homogenous slurry. The mulch shall cover and hold grass seed in contact with the soil without inhibiting growth of the seedlings. CONTRACTOR may utilize other mulches, such as recycle paper and wood blend, recycled paper, and companion binding accessories at his discretion in hydro-seeding.

2.8 MULCH ANCHORING MATERIALS

A. Mechanical Method: Tractor-drawn implement designed to punch and anchor mulch into the soil surface.

B. Cellulose Fiber: Cellulose fiber shall be applied at a net dry weight of 750 pounds per acre.

C. Liquid Mulch Binder: Non-asphaltic or petroleum based, Reinco, RMB plus (1-800-526-7687), Finn A 500 Hydro-Stik (1-800-873-3321), or equal capable of controlling wind and water erosion of mulch.

D. Mulch Netting: Prefabricated wood shaving mat with woven photodegradable netting.

2.9 EROSION CONTROL FABRIC

A. As specified on Plan Drawings and Erosion Control Plan.

2.10 WATER

A. Clean, potable, free of chemicals or impurities harmful to germination or turf growth.

B. The CONTRACTOR shall be responsible for supplying water for irrigation. OWNER supplied water will not be available at site.

2.11 FROST BLANKET

A. UV resistant fabric blanket manufactured to assist in germination equal to Fabriscape Frost Blanket (1-800-992-0550).

2.12 HERBICIDE

A. Broadleaf: Brominal ME4, or equal.

B. Pre-emergent: Tupersan, or approved equal.

## PART 3 EXECUTION

3.1 EXAMINATION

A. Verification: Verify that topsoil has been placed to the minimum depths required and that landscape/finished grading has been performed in accordance with Section 310000, Paragraph 3.7. Failure to properly prepare topsoil for seeding will result in rejection of seeding by ENGINEER.

B. Do not sow seed or initiate seeding operations when ground is wet or muddy following a rain event, when the ground surface is excessively dry and dusty, or when wind velocity will result in an uneven distribution of seed.

3.2 FERTILIZING

A. Apply fertilizer in accordance with manufacturer's instructions and in accordance with the topsoil analysis.

B. Apply other soil amendments as required by the topsoil analysis to provide optimum pH range for seed mix. Provide other amendments when required by soil test or as recommended by CONTRACTOR and approved by ENGINEER.

C. Apply amendments after raking of topsoil. Mix all soil amendments thoroughly and evenly into upper two inches of soil. Lightly water following application to assist in dissipation of fertilizer.

D. Do not apply fertilizer with same equipment used for seeding.

3.3 SEEDING

A. Dry Application:

1. Sow seed at the rates specified in one-half rates evenly in two intersecting directions. When using a broadcast or drop-type spreader, rake in lightly to insure good soil/seed contact. Soil shall be applied with the top ¼-inch of the soil. A cultipacker may also be used following broadcast seeding to improve soil/seed contact or alone as the method of dry seeding.

2. Manually sow seed where areas are not accessible to mechanized seeding equipment. Seed shall be evenly distributed and rake in to the top ¼-inch of the soil.

3. Mulching: Apply mulching material to retain moisture and minimize erosion. Apply straw mulch at a rate to provide ½ to 1-inch thick layer, approximately equal three (3) tons per acre. When using cellulose fiber as a mulching material, apply at 1,500 pounds per acre. Anchor mulch according to referenced methods.

4. Apply water with a fine spray after each seeded area has been mulched. Water sufficiently to saturate upper three – four inches of topsoil.

5. Place signs, rope off, or otherwise protect newly seeded areas from encroachment. Maintain protection until seeded areas are accepted by OWNER.

B. Hydroseeding

1. Mix water, seed, and fertilizer and agitate to homogeneously blend mixture. CONTRACTOR shall determine appropriate ratios to meet required seeding application rates as specified and fertilization rates as determined by the soil test.

2. All mixtures shall be constantly agitated from the time they are mixed until they are finally applied to the seedbed. To prevent fertilizer from burning seed, the slurry shall be applied within 30-minutes from the time it was added to the hydroseeding mix.

3. Following hydroseeding, utilize a straw blower to apply mulch. Hand mulch areas around trees, shrubs, landscape beds, and other areas where straw mulch is not desired. Apply at the rates specified in Section 3.3.A.3.

4. Cellulose fiber may be included in the hydroseeding mix for seeding embankments and steep slopes. All slopes greater than four horizontal to 1 vertical (4:1 or 25%) may be hydroseeded by the seed, fertilizer, water, and cellulose fiber method. All other areas shall be dry seeded or hydroseeded using straw mulch for stabilization as described in paragraph 3.3.B.1-3. The rate of cellulose fiber shall be 50 pounds per 100 gallons of water or as otherwise recommended by the County Agriculture Cooperative Extension.

5. Protect seeded areas as described in Section 3.3.A.5.

## 3.4 SODDING

1. Verification: Verify that grading is complete, and area is ready for sodding.

2. Lightly irrigate the soil prior to laying the sod.

3. Lay the first row of sod in a straight line with subsequent rows placed parallel a tight. Lateral joints shall be staggered to promote uniform growth. Do not stretch or overlap sod. Shape sod to form to the line and contour of play areas or infield areas when required. Edge sod if required to form clean line.

4. Lightly water sod during installation to prevent drying. Roll sod as sections are completed.

5. Thoroughly irrigate sod following installation so that the entire sod pad is wet and soil below the pad is wet.

6. Continue to water until sod is well established. Keep sod moist at all times for the week following installation. Watering may be required several times a day. Continue watering until sod is well rooted.

## 3.5 EROSION CONTROL

A. Temporary Seeding

1. Perform temporary seeding and mulching work when required to stabilize construction areas in accordance with the requirements of the Erosion and Sediment Control Plan.

2. Prior to final seeding, any temporarily seeded area shall have the existing stand of turf completely killed to prevent invasive growth of the temporary seed variety in the final seeding.

B. Geotextile Fabric

1. Install geotextile fabric of type designated on the Drawings for all newly seeded slopes greater than or equal to three horizontal to one vertical (3:1 or 33%).

2. Install geotextile fabric of type designated on Drawings for newly graded swales, drainage channels, and detention basin spillways where indicated on the Drawings. Geotextile swale linings indicated on the Drawings have been provided based upon their erosion resistance as compared to the calculated flow velocities for the channel. Where a geotextile lining is not indicated on Drawing, the calculated velocity for that swale is less than 2.0 feet per second and is not considered an erosive velocity under PADEP Chapter 102 Standards. When geotextile stabilization is not indicated, CONTRACTOR, at his discretion, may provide a photodegradable or biodegradable seed blanket to assist in germination and reduce the potential for repair and reseeding of the channel due to unanticipated flow velocities. CONTRACTOR is responsible for regrading, providing additional topsoil, and reseeding any areas that have washed or eroded regardless if geotextile lining is indicated on the Drawings.

3. Install geotextile fabric immediately following seeding to reduce the potential for accelerated erosion and seed loss.

4. Securely lap edges of fabric, provide velocity checks, trench and tuck ends of fabric, and securely staple and stake fabric at intervals recommended by the manufacturer. Manufacturer's instructions and specifications, as approved by ENGINEER, shall be considered the minimum requirement for execution of the Work.

C. Reseeding and Overseeding

1. During grow-in period, immediately repair areas that have washed or become eroded and perform additional measures as required to stabilize. When directed by ENGINEER, as authorized by a Change Order, sod may be installed at areas where stabilization is difficult.

2. Where areas have failed to germinate, CONTRACTOR shall overseed or slit-seed bare areas. Method of seeding shall depend on size of area to be reseeded and time of year. All areas seeded after the fall planting season shall be overseeded in the spring at a rate equal to one-half of the original seeding rate. Overseeding shall be performed when authorized under the provisions of Section 1.13.B.

3.6 MAINTENANCE

A. The CONTRACTOR shall perform all maintenance until the required growing condition is present as specified in Section 1.13.A and Substantial Completion has been established. Notify OWNER a minimum of three days in advance prior to performing any maintenance operation. Maintenance includes the following:

1. Edging: Edge along perimeter of all sidewalks, paved areas, landscape beds, infield areas, and slabs a maximum of three days prior to request for Substantial Completion inspection.

2. Mowing: Cool season grasses, including bluegrass, fine fescue, and perennial ryegrass shall be maintained at a height of 2-1/2- inches to 3-1/2-inches in the spring and fall. During the summer, the mowing height shall not be less than three inches. No more than 1/3 of the blade shall be removed in a single cutting.

a. The CONTRACTOR shall perform a minimum of one mowing a minimum of three days prior to requesting an inspection for Substantial Completion for any turf area included in the request for Substantial Completion inspection.

b. During the period from initial seeding through Substantial Completion, the CONTRACTOR shall be required to mow any contiguous area of grass greater than fifty square feet, including partially completed areas of seeding, when the average height of the grass in the fifty square foot area exceeds four-inches.

3. Fertilizing: CONTRACTOR shall fertilize seeded areas as required to assist in germination and establish a thick, healthy stand of grass until Substantial Completion is established. Fertilization shall be based upon the requirements of the turf species, time of year, and soil test results. CONTRACTOR shall be responsible for obtaining additional

soil test results when required for fertilization between initial seeding and establishment of Substantial Completion.

4. Lawn/Weed Control: The CONTRACTOR shall apply a pre-emergent soil applied herbicide for all spring and summer seedings to control the germination of crabgrass and other annual weed seeds. Prior to a request for Substantial Completion inspection, a post emergent, foliar applied, herbicide shall be applied to prevent the growth of broadleaf weeds in mid to late May to control summer weeds and in late September or early October to control fall weeds. Selection and proper use of herbicides is the CONTRACTOR's responsibility. All chemical applications shall be performed under the supervision of a licensed certified applicator.

5. Insect and Disease Control: The CONTRACTOR shall be responsible for monitoring all newly established lawn areas for insect damage and disease and taking any corrective measures as required. The CONTRACTOR shall only be responsible for disease and insect control until Substantial Completion is established.

6. Watering: The CONTRACTOR shall be responsible for maintaining sufficient moisture in the soil during germination and as required for turf establishment until Substantial Completion. The CONTRACTOR is not required to water any seeded areas but accepts responsibility for the failure of germination, slow germination, unhealthy stands of grass, or sparse vegetation that increases his maintenance responsibilities until substantial completion can be established.

7. Repair: Repair all areas that have washed or eroded, correct surface irregularities for areas that have settled and pond water, and remedy damage from improper use of herbicides or over fertilization.

END OF SECTION

# EXHIBIT A

# SPECIAL PROVISIONS - BASIC SITE MATERIALS AND METHODS

## PART 1 GENERAL

1.1 SECTION INCLUDES

A. Soil materials used for site construction including on-site excavated or in-place material and imported soil materials.

B. Aggregate materials used for site construction, drainage, and pavement base course.

C. Portland cement concrete materials used for construction of site pavements, slabs on grade, sidewalks, curbing, and other concrete site structures.

D. Geosynthethics used in site construction for layer separation, slope and embankment reinforcement, subsurface drainage, and erosion and sedimentation control.

1.2 RELATED DOCUMENTS

Not Used

1.3 REFERENCES

A. SOIL MATERIALS

1. AASHTO T180 – Moisture-Density Relations of Soils Using a 10-lb. Rammer and 18-inch Drop.

2. ASTM D689 – Test Methods for Moisture-Density Relations of Soil-Aggregate Mixtures, Using a 5.5 –lb. Rammer and a 12-inch Drop.

3. ASTM D1556 – Test Method for Density of Soil in Place by the Sand Cone Method.

4. ASTM D1557 – Test Method for Moisture-Density Relations of Soil-Aggregate Mixtures Using a 10-lb. Rammer and an 18-inch Drop.

5. ASTM D2167 – Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.

6. ASTM D2487 – Classification of Soils for Engineering Purposes.

7. ASTM D2922 – Test Methods for Density of Soil and SOIL Aggregate in Place by Nuclear Methods (Shallow Depth)

8. ASTM D3017 – Test Method for Moisture Content of Soil and Soil Aggregate in Place by Nuclear Methods (Shallow Depth)

9. ASTM C136 – Sieve Analysis of Fine and Coarse Aggregates.

10. ASTM D422 – Particle Size Analysis of Soils.

B. AGGREGATE MATERIALS

1. AASHTO M147 – Materials for Aggregate and Soil-Aggregate.

2. AASHTO T180 – Moisture-Density Relations of Soils Using a 10-lb. Rammer and 18-inch Drop.

3. ASTM C136 – Method for Sieve Analysis of Fine and Coarse Aggregates.

4. ASTM D698 – Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using a 5.5-lb. Rammer and a 12-inch Drop.

5. ASTM D1557 – Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using a 10-lb. Rammer and 18-inch Drop.

6. ASTM D2167 – Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.

7. ASTM D2487 – Classification of Soils for Engineering Purposes.

8. ASTM D 2922 – Test Methods for Density of Soil and Soil Aggregate in Place by Nuclear Methods (Shallow Depth).

9. ASTM D3017 – Test Method for Moisture Content of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

10. ASTM 4318 – Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

11. Pennsylvania Department of Transportation (PADOT) – Specifications Publication 408, latest edition.

C. BITUMINOUS CONCRETE AND BITUMINOUS MATERIAL

1. Pennsylvania Department of Transportation (PADOT) Specifications Publication 408, latest edition.

D. PORTLAND CEMENT CONCRETE MATERIAL

1. Pennsylvania Department of Transportation (PADOT) Specifications Publication 408, latest edition.

E. GEOSYNTHETIC MATERIAL

1. ASTM D751 – Standard Test Method for Coated Fabrics.

2. ASTM D4491 – Standard Test Methods for Water Permeability of Geotextiles by

Permittivity.

3. ASTM D4595 – Tensile Properties of Geotextiles by the Wide-Width Strip Method.

4. ASTM D4632 – Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.

F. JOINT MATERIALS AND JOINT SEALANTS

1. ASTM C920 – Standard Specification for Elastomeric Joint Sealants.

2. ASTM D1751 – Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)

3. ASTM D1752 – Standard Specification for Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction, Sections 5.1 through 5.4 with the compression requirement modified to 10 psi minimum and 25 psi maximum.

1.5 SUBMITTALS FOR REVIEW

A. Section 013300 – Submittals: Review Procedures for Submittals.

B. Geosynthetic Material Submittals:

1. Where the Contractor proposes to substitute geosynthetic materials different from those shown on plans, the contractor shall submit representative samples of all geosynthetic proposed for use, including manufacturer's name, designation, and installation instructions.

2. Submit detailed drawings, as prepared by the manufacturer, or Contractor, indicating the method of overlapping, joining, and anchoring of geosynthetic materials for each application.

1.6 SOURCE QUALITY CONTROL

A. The Contractor shall notify the Engineer prior to delivery of off-site borrow materials for use in site construction. The Engineer may require testing of the off-site soil material. If requested, the testing laboratory shall furnish both the Engineer and Contractor required copies of the test reports. The reports will be considered sufficient information to accept or reject the proposed imported soil materials.

B. If the indicated materials do not meet specified requirements, change material and retest.

C. Provide soil and aggregate materials of each designation from same source throughout the Work.

D. Provide aggregate from PADOT approved source based upon latest PADOT Bulletin.

E. Moisture content for any soil or aggregate material to be used for compacted fill in structural or non-structural areas shall not exceed a range of plus or minus 3.0 percent of optimum moisture content for that particular material. If the moisture contents fall outside of this range appropriate aeration or moisture conditioning measures shall be performed by the Contractor to maintain soil moisture contents within the specified range

## PART 2 PRODUCTS

### 2.1 SOIL MATERIALS

A. Definitions:

1. Structural Fill Zone: Any area scheduled for building construction, slabs on grade, rigid pavement, flexible pavements, retaining walls, detention basin berms and buffer zones. Structural backfill areas include wall backfill, foundation backfill, and retaining wall backfill zones. All utility trench backfill is considered as a structural fill zone.
2. Nonstructural Fill Zone: Any landscape area that is not included within Structural Fill Zone or the buffer area of the Structural Fill Zone.
3. Buffer Area: Area extending 10-feet beyond the perimeter of any building foundation line, including any areas of future expansion indicated on the Drawings, and 10-feet beyond the perimeter of all other Structural Fill Zones.
4. Soils: Earth or aggregate material.

B. General Fill: Inorganic on-site soils that do not contain rock fragments that can pass a six-inch mesh screen and are of suitable moisture content. To the extent that on-site material meets the requirements, such material may be used for General Fill. Provide Imported Fill material required to complete the Work due to insufficient quantity of existing on-site material or unsuitability of existing on-site material.

C. Structural Fill: Inorganic on-site soils with a maximum particle size of four inches. To the extent that on-site material meets the requirements, such material may be used for soil material. Provide Imported Fill material required to complete the Work due to insufficient quantity of existing on-site material or unsuitability of existing on-site material.

D. Imported Fill: Inorganic well-graded materials with 100-percent of the soil material passing a four-inch mesh screen, at least 25-percent passing a two-inch mesh sieve, and 10 to 49-percent passing a 200 mesh sieve. Liquid limit shall not exceed 40 with a maximum plasticity index of 20. Soil material shall classify as SC, SM, SW, GC, GM, or GW according to ASTM D2487. Clean, friable, and highly weathered may be utilized only when approved by the Engineer. Use of slag is not permitted.

E. Rock Fill: On-site excavated and shot rock fragments not exceeding 24-inches may be used in zones designated by the Engineer. Rock fill is not permitted within the structural fill zone, storm water detention or retention basins, or within six-feet of finished grade. Rock fill and placement shall be in accordance with the recommendations of the Engineer.

F. Select Trench Earth Fill: Material used as structural backfill for utility and storm sewer trenches shall be on-site or imported, clean earth meeting the requirements of Class II or III material, GW, GP, SW, SP, GM, GC, SM or SC in accordance with ASTM D2487. Materials shall have a maximum Plasticity Index of 15 in accordance with ASTM D4318, and shall contain no greater than 20% by weight passing a No. 200 U.S. Standard Sieve. Material shall not contain organic matter and shall be free of frozen materials, rock or gravel larger than 2-inches in any dimension.

G. Clay: Material used in constructing low-permeability clay bedding layers or low permeability embankment cores shall be on-site, or imported, clean material classifying as MH, ML, CH or CL in accordance with ASTM D2487. Clay material shall not contain objectionable quantities of debris, roots, and organic matter and shall be free of frozen materials, rock, gravel or coarse fragments larger than 3/8-inch. No less than 70% of the material by weight shall pass the No. 200 U.S. Standard Sieve, at least 25% of the material shall be less than .005 mm particle size, and at least 10 percent of the material shall be less than 0.002 mm particle size. Clay material shall have a Liquid Limit (LL) between 30 and 80 and a Plasticity Index (PI) between 15 and 50, as per ASTM 4318. The clay shall be able to be compacted to the required density specified herein with an associated permeability of $1x10^{-7}$ cm/sec or less according to ASTM D5084.

H. Topsoil: Friable loamy soil (as classified by the U.S. Department of Agriculture Handbook No. 18, Soil Survey Manual); free of subsoil, roots, grass, weeds, stone, and foreign matter; acidity range (pH) of 5.5 to 7.5; containing a minimum of 3 percent and a maximum of 10 percent organic matter. No more than 15 percent by weight shall be larger than a No. 10 U.S. Standard Sieve.

a. To the extent that on-site material meets the requirements, such material may be used for soil material. Provide imported topsoil material required to complete the Work due to insufficient quantity of existing on-site material or unsuitability of existing on-site material.

I. All imported soil materials must be recovered from approved borrow sources.

## 2.2 AGGREGATE MATERIALS

A. Aggregate material used in site construction shall meet the requirements of PADOT Publication 408, latest edition, Section 703.2, Table C.

B. Aggregate backfill and base material shall be a dense-graded mixture of natural or crushed gravel or crushed stone and drainage aggregate material shall be a open-graded mixture of crushed gravel, crushed stone, or crushed slag meeting the following requirements:

| Designation | Primary Use | AASHTO or PADOT Number |
|---|---|---|
| A-1 | Flexible Pavement Base Course | PA DOT 2A |
| A-2 | Stone Paving | PA DOT 2A |
| A-3 | Pipe Bedding (<21”) | No. 57 or No. 8 |
| | Pipe Bedding (>21”) | No. 8 |

| | | |
|---|---|---|
| A-4 | Initial Trench Backfill (<21”) | No. 57 or No. 8 |
| | Initial Trench Backfill (>21”) | No. 57 or No. 8 |
| A-5 | Open Graded Aggregate | No. 57 |

2.3 BITUMINOUS CONCRETE AND BITUMINOUS MATERIAL

A. Bituminous concrete and bituminous materials shall meet the requirements of PADOT Publication 408, latest edition.

B. Bituminous Materials:

1. Asphaltic Cement: Class PG64S-22, conforming to PADOT Publication 408, 702.1.

2. Bituminous Tack Coat: Emulsified Asphalt conforming to PADOT Publication 408, 460.2.

3. Bituminous Prime Coat: Emulsified Asphalt conforming to PADOT Publication 408, Section 461.2.

2.4 PORTLAND CEMENT AND CONCRETE MATERIALS

A. Performance Requirements: Unless otherwise specified on Contract Drawings, concrete material for cast-in-place and poured in-place site construction shall meet or exceed the requirements for cement concrete as specified in PADOT Publication 408, latest edition, Section 704.

B. Fiber: Unless otherwise specified on Contract Drawings, fibers for use in concrete shall meet or exceed the requirements as specified in PADOT Publication 408, latest edition, Section 708

C. Concrete Curing Material and Admixtures: Unless otherwise specified on Contract Drawings, concrete curing materials and admixtures shall meet or exceed the requirements for cement concrete as specified in PADOT Publication 408, latest edition, Section 711.

D. Protective Coating for Reinforced Concrete Surface: Unless otherwise specified on Contract Drawings, protective coatings for reinforced concrete surfaces shall meet or exceed the requirements for cement concrete as specified in PADOT Publication 408, latest edition, Section 1019.

2.5 GEOSYNTHETIC MATERIAL

A. Geotextiles shall conform to the requirements as specified in PADOT Publication 408, latest edition, Section 735.

B. Geogrids shall conform to the requirements as specified in PADOT Publication 408, latest edition, Section 738.

2.6 JOINT MATERIAL

A. Joint materials used in site construction include premolded expansion joint filler, longitudinal joint material, load transfer units for reinforced and plain cement concrete pavements, joint sealing materials, gaskets and waterstops, mortar, caulking compounds, and joint backing material.

B. Joint Material: Unless otherwise specified on Contract Drawings, joint materials and related accessories shall meet or exceed the requirements as specified in PADOT Publication 408, latest edition, Section 705.

**PART 3 EXECUTION**

A. Install products and materials in accordance with manufacturer's instructions and as directed by Division 2 Specification Sections utilizing materials specified in this Section.

B. Stockpile soil and aggregate materials on site at locations approved by the Owner.

1. Stockpile material in sufficient quantities to meet the Project schedule and requirements of the Work.

2. Separate differing materials with dividers or stockpile apart to prevent mixing.

3. Direct surface water away from stockpile to prevent erosion. Stabilize stockpiles in accordance with Erosion and Sediment Control Plan or as directed by County Conservation District.

4. Spoil piles shall be ramped and rolled with a vibratory roller and covered with plastic to prevent soils from becoming saturated. No consideration will be given to unsuitable moisture content of soils not protected from weather conditions.

5. Remove surplus stockpiled material from site and restore to original or design condition. Final grade to prevent free standing surface water.

END OF SECTION