

PROJECT MANUAL

FOR

PINE VIEW CEMETERY SINK HOLE REPAIR

GENERAL CONSTRUCTION

BIDDING DOCUMENTS AND TECHNICAL SPECIFICATIONS

PREPARED FOR:

Town of Queensbury
742 Bay Road
Queensbury, NY 12804

PREPARED BY:

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LABELLA PROJECT NUMBER 2240674.29



PROJECT MANUAL

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SECTION 001116

INVITATION TO BID

A Sealed bid for the:

PINE VIEW CEMETERY SINK HOLE REPAIR

will be received at the following address:

**PURCHASING AGENT
TOWN OF QUEENSBURY
742 BAY ROAD
QUEENSBURY, NEW YORK 12804**

until **2:00 p.m.** local time on **June 25, 2026**, and then at said office publicly opened and read aloud.

If the Bid is actually received by mail or by hand after the appointed time on the date specified it shall be rejected, notwithstanding that such Bid may have been placed in a mail box or other mail receptacle regularly maintained by the United States Postal Service before such time, and ordinarily in sufficient time to have been delivered on time.

A non-mandatory pre-bid conference will be held at the Pine View Cemetery Office, located at 21 Quaker Road, Queensbury, NY at 2:00 p.m. on June 11, 2026.

Questions about the bidding documents may be submitted in writing to LaBella (via email, see contact information below). 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 after **June 19, 2026** may not be answered.

The Project generally consists of the following work:

Removal and replacement of the existing pond embankment located in the Pine View Cemetery, including replacement of the pond level control structures, and reconstruction of the access drive over the embankment.

Work shall be substantially completed by **September 30, 2026**. Final restoration shall be completed and the project ready for final payment by **October 31, 2026**.

Electronic copies of the drawings and specifications can be obtained via email through the following contact(s):

Angelique Smith
LaBella Associates, DPC
Glens Falls, N.Y. 12801
Email: amsmith@labellapc.com
Tel: (518) 824-1923

Paul Guillet, PE
LaBella Associates, DPC
Glens Falls, N.Y. 12801
Email: pguillet@labellapc.com
Tel: (518) 824-1943

Note that only bidders who obtain bidding and contract documents from and are registered with LaBella Associates will receive notification of Addenda.

This work will be awarded as one (1) single prime contract.

The Bid will be received on a Lump Sum Basis. The Bid should not include sales and compensating use taxes on materials incorporated into the work.

Bid security in the amount of 5% of the Bid must accompany the Bid in accordance with the Instruction to Bidders.

The successful Bidder will be required to furnish a performance bond and a payment bond, each in an amount equal to 100% of the bid price. Bidders will also be required to furnish a Non-Collusive Affidavit and Iran Divestment Act.

The **Town of Queensbury** strongly encourages Minority and Women owned Business Enterprises and Section 3 Firms to apply.

The Contractor must use the higher of the prevailing federal, state, or applicable local wage rates paid to each trade for portions of the project further described in the Contract Documents. These rates apply to Subcontractors as well.

Attention of Bidders is particularly called to the requirements for ensuring that employees and applicants for employment are not discriminated against because of their race, color, religion, sex or national origin.

The **Town of Queensbury**, as Owner, reserves the right to accept or reject any and all bids, to waive any informality or technicality in any bid, and to readvertise for bids if deemed in the best interest of the **Town**.

By Order of: **Town of Queensbury**

END OF SECTION - 001116

SECTION 002113

INSTRUCTIONS TO BIDDERS

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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. Bidder - one who submits a Bid directly to Owner as distinct from a sub-bidder, who submits a bid to a Bidder.
 - B. Issuing Office - the office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.
 - C. Successful Bidder - the lowest, responsible and responsive Bidder to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award.

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 Bidder may register as a plan holder and obtain complete sets of Bidding Documents, in the number and format stated in the Advertisement or invitation to bid, from the Issuing Office. Bidders may rely that sets of Bidding Documents obtained from the Issuing Office are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.
- 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.
 - B. Bidding Documents will be provided in electric format only as Adobe PDF (portable Document Format) files. The Electronic Documents are intended to constitute the official Bidding Documents for the Project and may be used and relied upon the Bidder, unless otherwise stated in the Bidding Documents. The Bidder assumes all risks associated with the transmission, receipt, downloading, viewing, printing, or reproduction of the Electronic Documents, including any differences or errors resulting from such use.

- 2.05 Complete sets of Bidding Documents must be used in preparing Bids; neither Owner nor Engineer assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.06 Owner and Engineer in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

ARTICLE 3—QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate qualifications to perform the Work, each Bidder must be prepared to submit within five (5) days after Bid Opening upon Owner’s request detailed written evidence such as financial data, previous experience, present commitments and other such data as may be called for below (or in the Supplementary Instructions). Some or all of this data may be requested as part of the Bid by inclusion of a Bidder’s Qualification Statement in the Bid Forms that must be completed by all Bidders. Each bid must contain evidence of Bidder’s qualification to do business in the state where project is located or covenant to obtain such qualification prior to award of the contract.
- 3.02 Public Work Contractor And Subcontractor Registry
- A. Starting December 30, 2024, all contractors and subcontractors submitting bids or performing construction work on public work projects or private projects covered by Article 8 of the Labor Law are required to register with the New York State Department of Labor (NYSDOL) under Labor Law Section 220-i.
 - B. Private projects subject to Article 8 of the Labor Law include those covered by Labor Law Sections 224-a (public subsidy funded projects), 224-d (renewable energy systems), 224-e (broadband projects), 224-f (climate risk-related and energy transition projects, and roadway excavations.).
 - C. The law defines a “contractor” as any entity entering into a contract to perform construction, demolition, reconstruction, excavation, rehabilitation, repair, installation, renovation, alteration, or custom fabrication. The law defines “subcontractor” as any entity subcontracting with a contractor to perform construction, demolition, reconstruction, excavation, rehabilitation, repair, installation, renovation, alteration, or custom fabrication, which is subject to Article 8 of the Labor Law. Contractors are responsible for verifying that any subcontractors they work with are registered.
 - D. Contractors need to register before submitting any new bids or commencing new work on a covered project on or after December 30, 2024. Subcontractors need to register before commencing new work on a covered project on or after December 30, 2024. NYSDOL encourages all contractors and subcontractors to register as soon as possible to obtain a Certificate of Registration to avoid negatively impacting a bidding period or project schedule.

ARTICLE 4—PRE-BID CONFERENCE

- 4.01 A non-mandatory pre-bid conference will be held at the time and location indicated in the Invitation to Bid. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are

encouraged to attend and participate in the conference; however, attendance at this conference is not required to submit a Bid.

- 4.02 Information presented at the pre-Bid conference does not alter the Contract Documents. Owner will issue Addenda to make any changes to the Contract Documents that result from discussions at the pre-Bid conference. Information presented, and statements made at the pre-bid conference will not be binding or legally effective unless incorporated in an Addendum.

ARTICLE 5—EXAMINATION OF CONTRACT DOCUMENTS AND SITE

5.01 It is the responsibility of each Bidder before submitting a Bid:

- A. To examine thoroughly the Contract Documents and other related data identified in the Bidding Documents.
- B. To visit the site to become familiar with and satisfy Bidder as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work;
- C. To consider federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work;
- D. To study and carefully correlate Bidder's knowledge and observations with the Contract Documents and such other related data, and;
- E. To promptly notify Engineer of all conflicts, errors, ambiguities or discrepancies which Bidder has discovered in or between the Contract Documents and such other related documents.

5.02 Reference is made to the Supplementary Conditions for identification of:

- A. Those reports of explorations and tests of subsurface conditions at the site or contiguous to the site which have been utilized by Engineer in preparation of the Contract Documents. Bidder may rely upon the general accuracy of the “technical data” contained in such reports, but not upon other data, interpretations, opinions or information contained in such reports or otherwise relating to the subsurface conditions at the site, or upon the completeness thereof for the purposes of bidding or construction.
- B. Those drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Facilities) which are at or contiguous to the site that have been utilized by Engineer in preparation of the Contract Documents. Bidder may rely upon the general accuracy of the "technical data" contained in such drawings, but not upon other data, interpretations, opinions or information shown or indicated in such drawings or otherwise relating to such structures, or upon the completeness thereof for the purposes of bidding or construction.

Copies of such reports and drawings will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but “technical data” contained therein upon which Bidder is entitled to rely as provided in Paragraph 5.03 of the General Conditions has been identified and established in Paragraph SC-5.03 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion drawn from any “technical data” or any such data, interpretations, opinions or information.

- 5.03 Information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities or others, and Owner and Engineer do not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary Conditions.
- 5.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Contract Documents due to differing or unanticipated conditions appear in Paragraphs 5.04 and 5.05 of the General Conditions.
- 5.05 Before submitting a Bid each Bidder will be responsible for obtaining such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise, which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences or procedures of construction to be employed by Bidder and safety precautions and programs incident thereto or which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price and other terms and conditions of the Contract Documents.
- 5.06 If required by the Contract Documents, the Owner will provide each Bidder with access to the site to conduct such examinations, investigations, explorations, tests and studies necessary for submission of a Bid. Bidder must fill all holes and clean up and restore the site to its former conditions upon completion of such explorations, investigations, tests and studies.
- 5.07 Each bidder must inform themselves of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of their obligation to furnish all material and labor necessary to carry out the provisions of their contract. Insofar as possible the contractor, in carrying out the Work, must employ such methods or means as will not cause any interruption of or interference with the Work of any other contractor.
- 5.08 At the time of the opening of Bids each Bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and Contract Documents (including all Addenda). The failure or omission of any Bidder to examine any form, instrument or document shall in no way relieve any Bidder from any obligation in respect of his/her bid.
- 5.09 The Contractor agrees that before making a Contractor's proposal the Contractor carefully examines the Contract Documents, together with the site of the proposed Work, as well as its surrounding territory, and is fully informed regarding all the conditions affecting the Work to be done and labor and materials to be furnished for the completion of this contract, including the existence of wire, pipes, and other facilities and structures of municipal and other public service corporations on, over and under the site, and that this information was secured by personal investigation and research and not from estimates or records of the Owner, and that he will make no claim against the Owner by reason of estimates, tests, or representations of any officer or agent of the Owner.
- 5.10 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents and applying the specific means, methods, techniques, sequences or procedures of construction (if any) that may be shown or indicated or expressly required by the Contract Documents, that Bidder has given

Engineer written notice of all conflicts, errors, ambiguities and discrepancies that Bidder has discovered in the Contract Documents and the written resolutions thereof by Engineer is acceptable to Bidder, and that the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 6—AVAILABILITY OF LANDS FOR WORK, ETC

- 6.01 The lands upon which the Work is to be performed, rights-of-way and easements for access thereto and other lands designated for use by Contractor in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor. Easements for permanent structures or changes in existing structures are to be obtained and paid for by Owner unless otherwise provided in the Contract Documents.

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. **LaBella Associates DPC: Angelique Smith email: amsmith@labellapc.com**
 - B. **LaBella Associates DPC: Paul Guillet email: pguillet@labellapc.com**
- 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 after the deadline 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 five percent (5%) percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a Bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions. Such Bid bond 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.

ARTICLE 10—LIQUIDATED DAMAGES

- 10.01 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 11—SUBSTITUTE AND "OR-EQUAL" ITEMS

- 11.01 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.
- 11.02 During the bid period:

The materials and equipment described in the Bidding documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution. No substitution will be considered unless written request for approval has been submitted by the Bidder and has been received by Engineer/Architect at least fifteen (15) days prior to the date for receipt of Bids. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including drawings, cuts, performance and test data and any other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or Work that incorporation of the substitute would require shall be included. The burden of proof of the merit of the proposed substitute is upon the Bidder. The Engineer/Architect's decision of approval or disapproval of a proposed substitution shall be final. If Engineer/Architect approves any proposed substitution, such approval will be set

forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approval made in any other manner.

11.03 After Contact award:

The Contract, if awarded, will be on the basis of materials and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or-equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or-equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Agreement. The procedure for submission of any such application by Contractor and consideration by Engineer is set forth in Paragraphs 7.04 of the General Conditions and may be supplemented in the General Requirements.

11.04 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 12—SUBCONTRACTORS, SUPPLIERS AND OTHERS

12.01 Subcontracting of work to a maximum of fifty percent (50%) of the total contract amount is permissible under this contract.

12.02 If the work to be subcontracted requires licensing, evidence of proper licensing must be submitted with the request for approval. All subcontractors must submit proof of insurance. (Contractor's bodily injury, Contractor's property damage liability insurance, including blasting insurance and Workmen's Compensation Insurance) in the same amounts required under the Contractor's Agreement with the Owner.

12.03 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers and other persons and organizations to be submitted to Owner in advance of the Notice of Award, the apparent Successful Bidder, and any other Bidder so requested, shall within seven (7) days after the Bid opening submit to Owner a list of all Subcontractors, Suppliers and other persons and organizations (including those who are to furnish the principal items of material and equipment) proposed for those portions of the Work for which such identification is so required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, person or organization if requested by Owner. If Owner or Engineer/Architect after due investigation has reasonable objection to any proposed Subcontractor, Supplier, other person or organization, either may before the Notice of Award is given request the apparent Successful Bidder to submit an acceptable substitute without an increase in Bid price.

12.04 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 Subcontractor, Supplier, and other persons and organizations. The declining to make requested substitutions will not constitute grounds for sacrificing the Bid security of any Bidder. Any Subcontractor, Supplier, other person or organization listed and to whom Owner or Engineer does not make written objection prior to giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to

revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 7.06, of the General Conditions.

- 12.05 In contracts where the Contract Price is on the basis of Unit Price, the apparent Successful Bidder, prior to the Notice of Award, shall identify in writing to Owner those portions of the Work that such Bidder proposes to subcontract and after the Notice of Award may only subcontract portions of the Work with Owner's written consent.
- 12.06 Some or all of such identification of subcontractors and material and equipment suppliers may be requested as part of the Bid by inclusion of an appropriate form(s) in the Bid Forms that must be completed by all Bidders.
- 12.07 No Contractor shall be required to employ any Subcontractor, Supplier, other person or organization against whom the Contractor has reasonable objection.

ARTICLE 13—BID FORM

- 13.01 The Bid Form is included with the Bidding Documents; additional copies may be obtained from Engineer (or the Issuing Office).
- 13.02 All blanks on the Bid Form must be completed by printing in black ink or by typewriter. Where space has been provided, the Bid price(s) on the form must be stated in words and numerals; in case of a conflict, words will take precedence. Any quantities shown for unit price items are only an estimate and are in no way guaranteed as final quantities.
- 13.03 Bids by corporations must be executed in the corporate name by the president or a secretary and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown below the signature.
- 13.04 Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature, and the official business address of the partnership must be shown below the signature.
- 13.05 Bids by LLCs are to be signed by managing member/operating manager. All names must be typed or printed in black ink below the signature.
- 13.06 The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which must be filled in on the Bid Form).
- 13.07 The business address and telephone number for communications regarding the Bid must be shown.
- 13.08 Evidence of authority to conduct business as an out-of-state corporation in the state where the Work is to be performed shall be provided. State contractor license number, if any, must also be shown.

ARTICLE 14—SUBMITTAL OF BIDS

- 14.01 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid and must be enclosed in a plainly marked package 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, and must be accompanied by the Bid security and other required

documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid must be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid must be addressed to the location designated in the Advertisement.

- 14.02 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BIDS

- 15.01 An unopened Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 15.03 If within seventy-two (72) 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 at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE.

- 17.01 All Bids will remain subject to acceptance for forty-five (45) days after the day of the Bid opening, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to that date.

ARTICLE 18—EVALUATION OF BIDS AND AWARD OF CONTRACT

- 18.01 Owner reserves the right to reject any or all Bids, including without limitation the rights to reject any or all nonconforming, non-responsive, unbalanced or conditional Bids and to 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, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by Owner. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum

thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

- 18.02 In evaluating Bids, Owner will consider the qualifications of Bidders, whether or not the Bids comply with the prescribed requirements, and such alternatives, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award. For purposes of determining the lowest Bidder, Bids will be evaluated based on the total Bid amount calculated using the estimated quantities and unit prices included in the Bid Form.
- 18.03 Owner may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work as to which the identity of Subcontractors, Suppliers and other persons and organizations must be submitted as provided in the Supplementary Conditions. Owner also may consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.
- 18.04 Owner may conduct such investigations as Owner deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time. Owner reserves the right to reject the Bid of any Bidder who does not pass any such evaluation to Owner's satisfaction.
- 18.05 If the contract is to be awarded, it will be awarded to lowest Bidder whose evaluation by the Owner indicates to Owner that the award will be in the best interests of the Project.
- 18.06 If the contract is to be awarded, Owner will give Successful Bidder a Notice of Award within forty-five (45) days after the day of the Bid opening.

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 All bonds are required to be obtained from companies holding certificates of authority as acceptable sureties pursuant to 31 CFR part 223, "Surety Companies Doing Business with the United States." Performance Bonds shall be provided on EJCDC form C-610, no other forms are acceptable. Payment Bonds shall be provided on EJCDC form C-615, no other forms are acceptable.
- 19.03 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

ARTICLE 20—DISQUALIFICATION

- 20.01 The Owner reserves the right to refuse to issue a Bid Form to a prospective Bidder should such Bidder be in default for any of the following reasons:
- A. Failure to comply with any pre-qualification regulations of the Owner, if such regulations are cited or otherwise included, in the Contract Documents as a requirement for Bidding.
 - B. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force (with the Owner) at the time the Owner issues the Contract Documents to a prospective Bidder.
 - C. Contractor defaulted under previous contracts with the Owner.
 - D. Contractor has performed unsatisfactory work on previous contracts with the Owner.
- 20.02 Bids received from Bidders who have previously failed to complete contracts within the time required, or who have previously performed similar work in an unsatisfactory manner, may be rejected. A Bid may be rejected if the Bidder cannot show that he has the necessary ability, plant and equipment to commence the work at the time prescribed and thereafter to complete the work at the rate or within the time specified. A Bid may be rejected if the Bidder is already obligated for the performance of other work that would delay the commencement or completion of the work.
- 20.03 The Owner reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations contained in the Contract Documents and to complete the work described therein.
- 20.04 Bids shall be considered irregular and rejected for the following reasons:
- A. If the Bid is on a Form other than that furnished by the Owner, or, if the Owner's Bid Form is altered, or, if any part of the Bid Form is detached.
 - B. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind which make the Bid incomplete, indefinite, or otherwise ambiguous.
 - C. If the Bid does not contain a unit price for each pay item listed in the Bid Summary, except in the case of authorized alternate pay items, for which the Bidder is not required to furnish a unit price.
 - D. If the Bid contains unit prices that are obviously unbalanced.
 - E. If the Bid is not accompanied by the Bid Security specified by the Owner.

ARTICLE 21—SIGNING OF AGREEMENT

- 21.01 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 fifteen (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 ten (10) days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 22—SALES AND USE TAXES

22.01 Owner is exempt from New York State Sales and Use Taxes on materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Contract Price. Refer to Supplementary Conditions SC-7.10 for additional information.

ARTICLE 23—RETAINAGE

23.01 Provisions concerning retainage and Contractors' rights to deposit securities in lieu of retainage are set forth in the Agreement.

ARTICLE 24—WICKS EXEMPT

24.01 Each bidder on a public work contract, where the preparation of separate specifications is not required, shall submit with its bid a separate sealed list that names each subcontractor that the bidder will use to perform work on the contract, and the agreed-upon amount to be paid to each, for: (a) plumbing and gas fitting, (b) steam heating, hot water heating, ventilating and air conditioning apparatus and (c) electric wiring and standard illuminating fixtures. After the low bid is announced, the sealed list of subcontractors submitted with such low bid shall be opened and the names of such subcontractors shall then be announced.

A. All bidders must complete Section 004336 Proposed Subcontractor Form. The form should be legible, and it must be included, in a separate sealed envelope, with the other bid documents in the Bid Envelope. Bidders who plan to self-perform work must indicate this on the Proposed Subcontractor Form, as required.

B. Sign the Proposed Subcontractor Form in the space provided. An officer or a principal of a corporation or a partnership signing for the firm shall print or type the title of the person on the line provided. The same procedure shall apply to the bid of joint venture by two or more firms, except that the signature and title of an officer or a principal of each member firm of the joint venture shall be required. All signatures must be original. Mechanically reproduced signatures or copies are not acceptable.

C. No contract will be awarded without a completed and signed Proposed Subcontractor Form. Failure to submit, sign or provide Subcontractor's Agreed-Upon Amount on the Proposed Subcontractor Form will result in disqualification of the bid.

D. The sealed lists of subcontractors submitted by all other bidders shall be returned to them unopened after the contract is awarded.

24.02 After bids are received, any changes by the low bidder to subcontractors or agreed-upon amounts to be paid to each subcontractor shall require the approval of the Owner pursuant to Section 135 of the State Finance Law and Section 101 of New York State General Municipal Law. Submit any

proposed changes to the Proposed Subcontractor Form Contractor's Proposal in writing to the Owner's Representative. For changes proposed before award of the contract, send revisions to the Proposed Subcontractor Form in writing to the Owner's Representative.

END OF SECTION - 002113

SECTION 004113

BID FORM

CONTRACT 1 – GENERAL CONSTRUCTION

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 for: **Pine View Cemetery Sink Hole Repair**
- 1.02 This Bid is submitted to: **Town of Queensbury**
- 1.03 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.
- 1.04 The Work will be awarded as **one (1) contract**.

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 certified check, bank check, or a Bid Bond in accordance with the instructions to Bidders.
 - B. List of Proposed Subcontractors;
 - C. Non-Collusive Affidavit;
 - D. Certification of Compliance with the Iran Divestment Act;
 - E. Owner's Hold Harmless Agreement;
 - F. Required Bidder Qualification Statement with supporting data

ARTICLE 3—BASIS OF BID—LUMP SUM

- 3.01 *Lump Sum Bids*
 - A. Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

CONTRACT 1 – GENERAL CONSTRUCTION

BASE BID

Bid Item No. 1 – Pine View Cemetery Sink Hole Repair

Removal and replacement of the existing pond embankment located in the Pine View Cemetery, including replacement of the pond level control structures, and reconstruction of the access drive over the embankment.

Total Lump Sum Prices:

_____ (\$ _____)
(use words) (figures)

Bid Item No. 2 – CONTINGENCY ALLOWANCE

Total Lump Sum Price: **TWENTY THOUSAND DOLLARS (\$ 20,000.00)**

BASE BID SUMMARY

TOTAL LUMP SUM FOR ALL BASE BID ITEMS (Bid Item No. 1 + No. 2):

_____ (\$ _____)
(use words) (figures)

BID ITEM DESCRIPTIONS:

Bid Item No. 1 – Pine View Cemetery Sink Hole Repair

PART 1 – DESCRIPTION

Under this item the contractor shall complete all work associated with the construction of a portion of the road embankment along the access road in accordance with the Contract Drawings and Documents. All associated task required to complete the work are included in this bid item, generally described as:

PART 2 – WORK INCLUDED

Mobilization.

General Provisions.

Dig Safety NY Clearances.

Protection of existing facilities and structures.

Erosion and Sediment Control.

Tree Protection.

Dust Control.

Removal and off-site Disposal of demolished site features and/or surplus material.

Verification in field of existing conditions.

Cutting and patching.

Grading.

Construction of sheet pile cutoff wall.

Construction of embankment.

Construction of pond outlet control system.

Re-construction of access drive.

Site Restoration/surfacing (top soil and seeding).

PART 3 – ASSOCIATED WORK NOT INCLUDED

N/A

PART 4 – METHOD OF PAYMENT

Payment for this item will be made at lump sum price.

PART 5 – METHOD OF MEASUREMENT

The price bid for this item shall include the cost of furnishing all labor, equipment, instruments and other material necessary to satisfactorily complete the work.

Bid Item No. 2 – Contingency Allowance

PART 1 – DESCRIPTION

Under this item, the Contractor shall furnish all materials, labor and equipment necessary to complete field directed work at locations, with materials and with matters directed and authorized by the Engineer.

PART 2 – WORK INCLUDED

General Provisions

Periodic and Final Clean Up

Furnish all materials, labor, and equipment necessary to complete work as directed and authorized by the Engineer.

PART 3 – ASSOCIATED WORK NOT INCLUDED

N/A

PART 4 – METHOD OF PAYMENT

Payment for this item will be made on a lump sum price or time and material basis for each incident where directed and approved by the Engineer. Unused portions of the allowance will be credited to the Owner.

PART 5 – METHOD OF MEASUREMENT

The method of measurement for payment will be based upon the mutually agreed method for work completed in accordance with the Contract Documents.

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 forty-five (45) days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.
- 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.
 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, 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; 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 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. 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 Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
 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.
12. NON-COLLUSIVE BIDDING CERTIFICATION. As required by section 103-d of New York State General Municipal Law, the Bidder has completed and submitted with the Bid the certification in Specification 004519.
13. The Bidders must comply with New York State Department of Labor Prevailing Wage Rate Schedule and conditions of employment.

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 8.02.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 0044114

BID BOND (PENAL SUM FORM)

| | |
|--|--|
| <p>Bidder Name: Address <i>(principal place of business)</i>:</p> | <p>Surety Name: Address <i>(principal place of business)</i>:</p> |
| <p>Owner Name: Town of Queensbury Address <i>(principal place of business)</i>: 742 Bay Road Queensbury, New York 12804</p> | <p>Bid Project <i>(name and location)</i>: Pine View Cemetery Sink Hole Repair 21 Quaker Road Queensbury, New York 12804 Bid Due Date:</p> |
| <p>Bond Penal Sum: Date of Bond:</p> | |
| <p>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.</p> | |
| <p>Bidder</p> | <p>Surety</p> |
| <p align="center"><i>(Full formal name of Bidder)</i></p> | <p align="center"><i>(Full formal name of Surety) (corporate seal)</i></p> |
| <p>By: _____ <i>(Signature)</i></p> | <p>By: _____ <i>(Signature) (Attach Power of Attorney)</i></p> |
| <p>Name: _____ <i>(Printed or typed)</i></p> | <p>Name: _____ <i>(Printed or typed)</i></p> |
| <p>Title: _____</p> | <p>Title: _____</p> |
| <p>Attest: _____ <i>(Signature)</i></p> | <p>Attest: _____ <i>(Signature)</i></p> |
| <p>Name: _____ <i>(Printed or typed)</i></p> | <p>Name: _____ <i>(Printed or typed)</i></p> |
| <p>Title: _____</p> | <p>Title: _____</p> |
| <p><i>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.</i></p> | |

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.

WICKS EXEMPT LIST OF SUBCONTRACTORS

NOTE: This form is required for "Single-Contract" projects exempt from the Wicks Law. Failure to submit this form correctly will result in disqualification of the bid.

| | | | |
|--------------------------------|---|-----------|----------------------|
| Contractor's Name and Address: | Project Description (<i>Project Title and Address</i>): | Bid Date: | Total Contract Amt.: |
| Federal ID No. | | | |

Indicate ANY work to be **self-performed** by the contractor in the following categories (check all that apply):

- Plumbing and Gas Fitting
- Steam Heating, Hot Water Heating, Ventilating and AC Apparatus
- Electric Wiring and Standard Illuminating Fixtures

If ALL contract work is to be self-performed, i.e., **no subcontractors** will be used, please check this box , skip to the bottom of this form, and sign it as required.

| Subcontractor's Name, Address and Federal ID No. | Check (✓) only one. | | | General Description of Work | Subcontractor's Contract Amt. |
|--|----------------------------|--|---|-----------------------------|-------------------------------|
| | Plumbing and Gas Fitting | Steam Heating, Hot Water Heating, Ventilating and AC Apparatus | Electric Wiring and Standard Illuminating Fixture | | |
| Federal ID No. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Federal ID No. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Federal ID No. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Federal ID No. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |

This form must be filled out completely and legibly, signed by a company authorized representative and included in **a separate, sealed envelope** within the bid envelope. Use Page 2 if needed.

Failure to complete this form accurately and in its entirety, in accordance with Section 002113, will result in disqualification of the bid.

Company Authorized Signature:

Title:

Date:

SECTION 004513

BIDDER'S QUALIFICATIONS STATEMENT

| |
|--|
| THE INFORMATION SUPPLIED IN THIS DOCUMENT IS CONFIDENTIAL TO THE EXTENT PERMITTED BY LAWS AND REGULATIONS |
|--|

ARTICLE 1—GENERAL INFORMATION

1.01 Provide contact information for the Business:

| | | | |
|---------------------------------------|--|----------------|--|
| Legal Name of Business: | | | |
| Corporate Office | | | |
| Name: | | Phone number: | |
| Title: | | Email address: | |
| Business address of corporate office: | | | |
| | | | |
| | | | |
| Local Office | | | |
| Name: | | Phone number: | |
| Title: | | Email address: | |
| Business address of local office: | | | |
| | | | |
| | | | |

1.02 Provide information on the Business's organizational structure:

| | | | |
|---|--|---|--|
| Form of Business: | <input type="checkbox"/> Sole Proprietorship <input type="checkbox"/> Partnership <input type="checkbox"/> Corporation | | |
| <input type="checkbox"/> Limited Liability Company <input type="checkbox"/> Joint Venture comprised of the following companies: | | | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| Provide a separate Qualification Statement for each Joint Venturer. | | | |
| Date Business was formed: | | State in which Business was formed: | |
| Is this Business authorized to operate in the Project location? | | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Pending | |

1.03 Identify all businesses that own Business in whole or in part (25% or greater), or that are wholly or partly (25% or greater) owned by Business:

| | | | |
|-------------------|--|--------------|--|
| Name of business: | | Affiliation: | |
| Address: | | | |
| Name of business: | | Affiliation: | |
| Address: | | | |
| Name of business: | | Affiliation: | |
| Address: | | | |

1.04 Provide information regarding the Business’s officers, partners, and limits of authority.

| | | | |
|-------------------------------|--|---------------------|----|
| Name: | | Title: | |
| Authorized to sign contracts: | <input type="checkbox"/> Yes <input type="checkbox"/> No | Limit of Authority: | \$ |
| Name: | | Title: | |
| Authorized to sign contracts: | <input type="checkbox"/> Yes <input type="checkbox"/> No | Limit of Authority: | \$ |
| Name: | | Title: | |
| Authorized to sign contracts: | <input type="checkbox"/> Yes <input type="checkbox"/> No | Limit of Authority: | \$ |
| Name: | | Title: | |

ARTICLE 2—LICENSING

2.01 Provide information regarding licensure for Business:

| | | | |
|-------------------|--|------------------|--|
| Name of License: | | | |
| Licensing Agency: | | | |
| License No: | | Expiration Date: | |
| Name of License: | | | |
| Licensing Agency: | | | |
| License No: | | Expiration Date: | |

ARTICLE 3—DIVERSE BUSINESS CERTIFICATIONS

3.01 Provide information regarding Business’s Diverse Business Certification, if any. Provide evidence of current certification.

| Certification | Certifying Agency | Certification Date |
|--|-------------------|--------------------|
| <input type="checkbox"/> Disadvantaged Business Enterprise | | |
| <input type="checkbox"/> Minority Business Enterprise | | |
| <input type="checkbox"/> Woman-Owned Business Enterprise | | |

| | | |
|---|--|--|
| <input type="checkbox"/> Small Business Enterprise | | |
| <input type="checkbox"/> Disabled Business Enterprise | | |
| <input type="checkbox"/> Veteran-Owned Business Enterprise | | |
| <input type="checkbox"/> Service-Disabled Veteran-Owned Business | | |
| <input type="checkbox"/> HUBZone Business (Historically Underutilized) Business | | |
| <input type="checkbox"/> Other | | |
| <input type="checkbox"/> None | | |

ARTICLE 4—SAFETY

4.01 Provide information regarding Business’s safety organization and safety performance.

| | | |
|------------------------------------|----------------|------------|
| Name of Business’s Safety Officer: | | |
| Safety Certifications | | |
| Certification Name | Issuing Agency | Expiration |
| | | |
| | | |

4.02 Provide Worker’s Compensation Insurance Experience Modification Rate (EMR), Total Recordable Frequency Rate (TRFR) for incidents, and Total Number of Recorded Manhours (MH) for the last 3 years and the EMR, TRFR, and MH history for the last 3 years of any proposed Subcontractor(s) that will provide Work valued at 10% or more of the Contract Price. Provide documentation of the EMR history for Business and Subcontractor(s).

| Year | | | | | | | | | |
|---------|-----|------|----|-----|------|----|-----|------|----|
| Company | EMR | TRFR | MH | EMR | TRFR | MH | EMR | TRFR | MH |
| | | | | | | | | | |
| | | | | | | | | | |

ARTICLE 5—FINANCIAL

5.01 Provide the name, address, and telephone number of an individual who represents each of the following and whom the Owner may contact to investigate your financial responsibility: a bank and a major material supplier.

| | |
|------------------------|--|
| Bank Name: | |
| Bank Contact: | |
| Bank Business address: | |
| Bank Phone No.: | |

| | |
|----------------------------|--|
| Supplier Name: | |
| Supplier Contact: | |
| Supplier Business address: | |
| Supplier Phone No.: | |

ARTICLE 6—SURETY INFORMATION

6.01 Provide information regarding the surety company that will issue required bonds on behalf of the Business, including but not limited to performance and payment bonds.

| | | | |
|--|--|-----------------|--|
| Surety Name: | | | |
| Surety is a corporation organized and existing under the laws of the state of: | | | |
| Is surety authorized to provide surety bonds in the Project location? | <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| Is surety listed in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” published in Department Circular 570 (as amended) by the Bureau of the Fiscal Service, U.S. Department of the Treasury? | <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| Mailing Address (principal place of business): | | | |
| Physical Address (principal place of business): | | | |
| Phone (main): | | Phone (claims): | |

ARTICLE 7—INSURANCE

7.01 Provide information regarding Business’s insurance company(s), including but not limited to its Commercial General Liability carrier. Provide information for each provider.

| | | | |
|---|--|--|--|
| Name of insurance provider, and type of policy (CLE, auto, etc.): | | | |
| Insurance Provider | Type of Policy (Coverage Provided) | | |
| | | | |
| | | | |
| Are providers licensed or authorized to issue policies in the Project location? | <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| Does provider have an A.M. Best Rating of A-VII or better? | <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| Mailing Address | | | |

| | | | |
|--|--|-----------------|--|
| (principal place of business): | | | |
| Physical Address (principal place of business): | | | |
| | | | |
| Phone (main): | | Phone (claims): | |

ARTICLE 8—CONSTRUCTION EXPERIENCE

8.01 Provide information that will identify the overall size and capacity of the Business.

| | |
|--|--|
| Average number of current full-time employees: | |
| Estimate of revenue for the current year: | |
| Estimate of revenue for the previous year: | |

8.02 Provide information regarding the Business’s previous contracting experience.

| | | | |
|---|--|----------------------|--|
| Years of experience with projects like the proposed project: | | | |
| As a general contractor: | | As a joint venturer: | |
| Has Business, or a predecessor in interest, or an affiliate identified in Paragraph 1.03: | | | |
| Been disqualified as a bidder by any local, state, or federal agency within the last 5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| Been barred from contracting by any local, state, or federal agency within the last 5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| Been released from a bid in the past 5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| Defaulted on a project or failed to complete any contract awarded to it? <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| Refused to construct or refused to provide materials defined in the contract documents or in a change order? <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| Been a party to any currently pending litigation or arbitration? <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| Provide full details in a separate attachment if the response to any of these questions is Yes. | | | |

8.03 List all projects currently under contract in Schedule A and provide indicated information.

8.04 List a minimum of three and a maximum of six projects completed in the last 5 years in Schedule B and provide indicated information to demonstrate the Business’s experience with projects similar in type and cost of construction.

8.05 In Schedule C, provide information on key individuals whom Business intends to assign to the Project. Provide resumes for those individuals included in Schedule C. Key individuals include the

Project Manager, Project Superintendent, Quality Manager, and Safety Manager. Resumes may be provided for Business's key leaders as well.

ARTICLE 9—REQUIRED ATTACHMENTS

- 9.01 Provide the following information with the Statement of Qualifications:
- A. If Business is a Joint Venture, separate Qualifications Statements for each Joint Venturer, as required in Paragraph 1.02.
 - B. Diverse Business Certifications if required by Paragraph 3.01.
 - C. Certification of Business's safety performance if required by Paragraph 4.02.
 - D. Attachments providing additional information as required by Paragraph 8.02.
 - E. Schedule A (Current Projects) as required by Paragraph 8.03.
 - F. Schedule B (Previous Experience with Similar Projects) as required by Paragraph 8.04.
 - G. Schedule C (Key Individuals) and resumes for the key individuals listed, as required by Paragraph 8.05.
 - H. Additional items as pertinent.

This Statement of Qualifications is offered by:

Business: _____
(typed or printed name of organization)

By: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(date signed)

(If Business 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)

Address for giving notices:

Designated Representative:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address: _____

Phone: _____

Email: _____

Schedule A—Current Projects

| | | | |
|---|-----------------|------------------------|-------------------------|
| Name of Organization | | Project Name | |
| Project Owner | | | |
| General Description of Project | | | |
| Project Cost | Date Project | | |
| Key Project Personnel | Project Manager | Project Superintendent | Safety Manager |
| Name | | | Quality Control Manager |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) | | | |
| Owner | Name | Title/Position | Organization |
| Designer | | | Telephone |
| Construction Manager | | | Email |

| | | | |
|---|-----------------|------------------------|-------------------------|
| Project Owner | | Project Name | |
| General Description of Project | | | |
| Project Cost | Date Project | | |
| Key Project Personnel | Project Manager | Project Superintendent | Safety Manager |
| Name | | | Quality Control Manager |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) | | | |
| Owner | Name | Title/Position | Organization |
| Designer | | | Telephone |
| Construction Manager | | | Email |

| | | | |
|---|-----------------|------------------------|-------------------------|
| Project Owner | | Project Name | |
| General Description of Project | | | |
| Project Cost | Date Project | | |
| Key Project Personnel | Project Manager | Project Superintendent | Safety Manager |
| Name | | | Quality Control Manager |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) | | | |
| Owner | Name | Title/Position | Organization |
| Designer | | | Telephone |
| Construction Manager | | | Email |

Schedule B—Previous Experience with Similar Projects

| | | | |
|---|-----------------|------------------------|-------------------------|
| Name of Organization | | Project Name | |
| Project Owner | | | |
| General Description of Project | | | |
| Project Cost | Date Project | | |
| Key Project Personnel | Project Manager | Project Superintendent | Safety Manager |
| Name | | | Quality Control Manager |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) | | | |
| Owner | Name | Title/Position | Organization |
| Designer | | | Telephone |
| Construction Manager | | | Email |
| | | | |
| Project Owner | | Project Name | |
| General Description of Project | | | |
| Project Cost | Date Project | | |
| Key Project Personnel | Project Manager | Project Superintendent | Safety Manager |
| Name | | | Quality Control Manager |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) | | | |
| Owner | Name | Title/Position | Organization |
| Designer | | | Telephone |
| Construction Manager | | | Email |
| | | | |
| Project Owner | | Project Name | |
| General Description of Project | | | |
| Project Cost | Date Project | | |
| Key Project Personnel | Project Manager | Project Superintendent | Safety Manager |
| Name | | | Quality Control Manager |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) | | | |
| Owner | Name | Title/Position | Organization |
| Designer | | | Telephone |
| Construction Manager | | | Email |
| | | | |
| Project Owner | | Project Name | |
| General Description of Project | | | |
| Project Cost | Date Project | | |
| Key Project Personnel | Project Manager | Project Superintendent | Safety Manager |
| Name | | | Quality Control Manager |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) | | | |
| Owner | Name | Title/Position | Organization |
| Designer | | | Telephone |
| Construction Manager | | | Email |

Schedule B—Previous Experience with Similar Projects

| | | | |
|---|-----------------|------------------------|-------------------------|
| Name of Organization | | Project Name | |
| Project Owner | | | |
| General Description of Project | | | |
| Project Cost | Date Project | | |
| Key Project Personnel | Project Manager | Project Superintendent | Safety Manager |
| Name | | | Quality Control Manager |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) | | | |
| Owner | Name | Title/Position | Organization |
| Designer | | | Telephone |
| Construction Manager | | | Email |
| | | | |
| Project Owner | | Project Name | |
| General Description of Project | | | |
| Project Cost | Date Project | | |
| Key Project Personnel | Project Manager | Project Superintendent | Safety Manager |
| Name | | | Quality Control Manager |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) | | | |
| Owner | Name | Title/Position | Organization |
| Designer | | | Telephone |
| Construction Manager | | | Email |
| | | | |
| Project Owner | | Project Name | |
| General Description of Project | | | |
| Project Cost | Date Project | | |
| Key Project Personnel | Project Manager | Project Superintendent | Safety Manager |
| Name | | | Quality Control Manager |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) | | | |
| Owner | Name | Title/Position | Organization |
| Designer | | | Telephone |
| Construction Manager | | | Email |
| | | | |
| Project Owner | | Project Name | |
| General Description of Project | | | |
| Project Cost | Date Project | | |
| Key Project Personnel | Project Manager | Project Superintendent | Safety Manager |
| Name | | | Quality Control Manager |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) | | | |
| Owner | Name | Title/Position | Organization |
| Designer | | | Telephone |
| Construction Manager | | | Email |

Schedule C—Key Individuals

| Project Manager | | | |
|--|--|---------------------------------------|-----------------------------------|
| Name of individual | | | |
| Years of experience as project manager | | | |
| Years of experience with this organization | | | |
| Number of similar projects as project manager | | | |
| Number of similar projects in other positions | | | |
| Current Project Assignments | | | |
| Name of assignment | | Percent of time used for this project | Estimated project completion date |
| | | | |
| | | | |
| | | | |
| Reference Contact Information (listing names indicates approval to contact named individuals as a reference) | | | |
| Name | | Name | |
| Title/Position | | Title/Position | |
| Organization | | Organization | |
| Telephone | | Telephone | |
| Email | | Email | |
| Project | | Project | |
| Candidate's role on project | | Candidate's role on project | |
| Project Superintendent | | | |
| Name of individual | | | |
| Years of experience as project superintendent | | | |
| Years of experience with this organization | | | |
| Number of similar projects as project superintendent | | | |
| Number of similar projects in other positions | | | |
| Current Project Assignments | | | |
| Name of assignment | | Percent of time used for this project | Estimated project completion date |
| | | | |
| | | | |
| | | | |
| Reference Contact Information (listing names indicates approval to contact named individuals as a reference) | | | |
| Name | | Name | |
| Title/Position | | Title/Position | |
| Organization | | Organization | |
| Telephone | | Telephone | |
| Email | | Email | |
| Project | | Project | |
| Candidate's role on project | | Candidate's role on project | |

| Safety Manager | | | |
|--|--|---------------------------------------|-----------------------------------|
| Name of individual | | | |
| Years of experience as project manager | | | |
| Years of experience with this organization | | | |
| Number of similar projects as project manager | | | |
| Number of similar projects in other positions | | | |
| Current Project Assignments | | | |
| Name of assignment | | Percent of time used for this project | Estimated project completion date |
| | | | |
| | | | |
| | | | |
| Reference Contact Information (listing names indicates approval to contact named individuals as a reference) | | | |
| Name | | Name | |
| Title/Position | | Title/Position | |
| Organization | | Organization | |
| Telephone | | Telephone | |
| Email | | Email | |
| Project | | Project | |
| Candidate's role on project | | Candidate's role on project | |
| Quality Control Manager | | | |
| Name of individual | | | |
| Years of experience as project superintendent | | | |
| Years of experience with this organization | | | |
| Number of similar projects as project superintendent | | | |
| Number of similar projects in other positions | | | |
| Current Project Assignments | | | |
| Name of assignment | | Percent of time used for this project | Estimated project completion date |
| | | | |
| | | | |
| | | | |
| Reference Contact Information (listing names indicates approval to contact named individuals as a reference) | | | |
| Name | | Name | |
| Title/Position | | Title/Position | |
| Organization | | Organization | |
| Telephone | | Telephone | |
| Email | | Email | |
| Project | | Project | |
| Candidate's role on project | | Candidate's role on project | |

SECTION 004519

NON-COLLUSIVE AFFIDAVIT

(Required by Section 103-d of the General Municipal Law)

- A. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:
 - 1. The prices in this bid have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
 - 2. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor, and,
 - 3. No attempt has been made, or will be made, by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

- B. A bid shall not be considered for award nor shall any award be made where (A), (1), (2), and (3) above have not been complied with; provided however, that if in any case the bidder cannot make the foregoing certifying, the bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefore. Where (A), (1), (2), and (3) above have not been complied with, the bid shall not be considered for award nor shall any award be made unless the head of the purchasing unit of the political subdivision, public department, agency or official thereof to which the bid is made or his designee, determined that such disclosure was not made for the purpose of restricting competition.

- C. The fact that the bidder (A) has published price lists, rates or tariffs governing items being procured, (B) has informed prospective customers or proposed or pending publication of new or revised price lists for such items (C) has sold the same item to other customers at the same prices being bid, does not constitute, without more, a disclosure within the meaning subparagraph (A) (1).

- D. Any bid hereafter made to any political subdivision of the state or any public department, agency or official thereof by a corporate bidder for work or state services performed or to be performed or goods sold or to be sold, where competitive bidding is required by statute, rule, regulation, or local law, and where such bid contains the certification referred to in subdivision one (1) of this section, shall be deemed to have authorized by the board of directors of the bidder, and such authorization shall be deemed to include the signing and submission of the bid and the inclusion therein of the certificate as to non-collusion as the act and deed of the corporation.

Name of Firm: _____

Signed by: _____

Title: _____

Date: _____

**RESOLUTION AUTHORIZING SUBMISSION OF BIDS BY
CORPORATION AND EXECUTION OF NON-COLLUSION CERTIFICATE
AND WAIVER OF IMMUNITY CLAUSE**

Resolves that _____ be authorized to sign and submit the bid or proposal of this corporation for _____ Town of Queensbury, New York, Warren County, and to include in such bid or proposal the certificate as to non-collusion and waiver of immunity clause required by Section 103 of the General Municipal Law as the act and deed of such corporation, and for any inaccuracies or misstatement in such certificate this corporate bidder shall be liable under penalties of perjury.

The foregoing is a true and correct copy of the resolution adopted by _____ Corporation at a meeting of its board of directors held on the _____ day of _____, 2018.

(SEAL OF THE CORPORATION)

Signature of Secretary

**INDIVIDUAL EXECUTION OF NON-COLLUSION
CERTIFICATE AND WAIVER OF IMMUNITY CLAUSE**

I, _____ hereby sign and submit this proposal for _____ Town of Queensbury, New York, Warren County, and to include in such bid or proposal the certificate as to non-collusion and waiver of immunity clause required by Section 103 of the General Municipal Law as the act and deed of this individual, and for any inaccuracies or misstatement in such certificate this corporate bidder shall be liable under penalties of perjury.

Signature of Individual

Date

END OF SECTION-004519

SECTION 004520

IRAN DIVESTMENT ACT CERTIFICATION

**Project: Pine View Cemetery Sink Hole Repair
Owner: Town of Queensbury**

By submission of this Bid, Bidder certifies, under penalty of perjury, that to the best of their knowledge and belief, that Bidder is not on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the State Finance Law (the "Prohibited Entities List" of entities determined to be non-responsive bidders/offers pursuant to the New York State Iran Divestment Act of 2012), posted at: <https://ogs.ny.gov/iran-divestment-act-2012>

The Bidder further certifies that:

1. The Bidder is not engaged in investment activities in Iran as described in State Finance Law §165-a, and is not identified on the Prohibited Entities List referenced above as of the date of this Bid.
2. The Bidder will not utilize on this Contract any subcontractor that is identified on the Prohibited Entities List.
3. Should the Bidder seek to renew, extend, or assign this Contract if awarded, the Bidder will provide the same certification at the time of such renewal, extension, or assignment.
4. The Bidder understands that the Owner reserves the right to reject any bid, request for assignment, renewal, or extension submitted by an entity that appears on the Prohibited Entities List prior to the award, assignment, renewal, or extension of a contract, and to pursue a responsibility review with respect to any entity that is awarded a contract and is found to appear on the Prohibited Entities List after contract award.
5. The Bidder understands that if, during the term of the Contract, the Owner receives information that the Bidder is in violation of the above-referenced certification, the Owner will review such information and offer the Bidder an opportunity to respond. If the Bidder fails to demonstrate that it has ceased its engagement in the investment activity that is in violation of the Act within ninety (90) days after the determination of such violation, the Owner shall take such action as may be appropriate and provided for by law, rule, or contract, including but not limited to imposing sanctions, seeking compliance, recovering damages, or declaring the Bidder in default.

BIDDER:

Firm Name: _____

Address: _____

SIGNATURE OF AUTHORIZED REPRESENTATIVE:

Signature: _____ Date: _____

Printed Name / Title: _____

END OF SECTION - 004520

SECTION 004900

TOWN OF QUEENSBURY HOLD HARMLESS AGREEMENT

Contractor shall maintain insurance as required by Section 007300, Supplementary Conditions, Paragraph 6.03.

The Contractor shall indemnify and save harmless the Owner, the Local Government, The Engineer and their Agents and Employees (hereinafter referred to as "Owner"), and the Design Engineer, (hereinafter referred to as "Engineer"), from and against all claims, damages, losses and expense (including but not limited to, attorneys' fees), arising out of, or resulting from, the performance of the work, sustained by any person or persons, provided that any such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of property caused by the negligent act or omission of Contractor or it's Employees, Agents or Subcontractors.

Signature: _____

Date: _____

Company: _____

Address: _____

Authorized Representative: _____

Title: _____

END OF SECTION-004900

SECTION 005100
NOTICE OF AWARD

Date of Issuance:

Owner: Town of Queensbury Owner's Project No.:
Engineer: LaBella Associates, DPC. Engineer's Project No.: 224674.29
Project: Pine View Cemetery Sink Hole Repair
Contract Name: General Construction
Bidder:
Bidder's Address:

You are notified that Owner has accepted your Bid dated **[date]** for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

Pine View Cemetery Sink Hole Repair

Removal and replacement of the existing pond embankment located in the Pine View Cemetery, including replacement of the pond level control structures, and reconstruction of the access drive over the embankment.

The Contract Price of the awarded Contract is **[\$[Contract Price]]**. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

Three (3) unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner **three (3)** counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: **Town of Queensbury**

By (signature): _____

Name (printed): _____

Title: _____

Copy: Engineer

SECTION 005200

AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between **Town of Queensbury** (“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: **Removal and replacement of the existing pond embankment located in the Pine View Cemetery, including replacement of the pond level control structures, and reconstruction of the access drive over the embankment**

ARTICLE 2—THE PROJECT

- 2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: **Town of Queensbury, Pine View Cemetery, General Construction**

ARTICLE 3—ENGINEER

- 3.01 The Owner has retained LaBella Associates, DCP (“Engineer”) to act as Owner’s representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.
- 3.02 The part of the Project that pertains to the Work has been designed by the Engineer.

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 **September 30, 2026**, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **October 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 and Milestones not achieved 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. Such losses include, but are not limited to, extended engineering and construction observation services, additional administrative time of Owner's staff, prolonged disruption to the surrounding area

and the traveling public, delayed realization of the Project's intended benefits, and continued compliance and reporting obligations associated with the Project's funding sources. The liquidated damages amount stated below represents the parties' reasonable, good-faith estimate of the daily losses Owner would incur from delayed completion, established at the time of contracting when such actual damages were difficult to ascertain with precision, and is not intended as a penalty. Accordingly, instead of requiring proof of such losses, 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 of \$_____.
- All specific cash allowances are included in the above price in accordance with Paragraph 13.02 of the General Conditions.
- 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 progress payments on the basis of Contractor's Applications for Payment each month 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.

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-Five (95)** percent of the value of the Work completed (with the balance being retainage).
 - b. **Ninety-Five (95)** percent of cost of materials and equipment is 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 will bear interest at the rate of **zero (0)** 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.
 6. Drawings included in the bid set, entitled "Pine View Cemetery Sink Hole Repair", prepared by LaBella Associates DPC, dated "May 22, 2026".
 7. Addenda (numbers ____ to ____, inclusive).
 8. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid (pages ____ to ____, inclusive).
 - b. Documentation submitted by Contractor prior to Notice of Award.

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

ARTICLE 9—MISCELLANEOUS

9.01 *Terms*

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

9.02 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto 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 Documents.

9.03 *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.

9.04 *Severability*

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall 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.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

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

Owner:

Town of Queensbury

(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, 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 005500

NOTICE TO PROCEED

Owner: Town of Queensbury Owner's Project No.: _____
Engineer: LaBella Associates, DPC Engineer's Project No.: 2240674.29
Contractor: _____ Contractor's Project No.: _____
Project: Pine View Cemetery Sink Hole Repair
Contract Name: General Construction
Effective Date of Contract: _____

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on _____ pursuant to Paragraph 4.01 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement:

The date by which Substantial Completion must be achieved is **September 30, 2026**, and the date by which readiness for final payment must be achieved is **October 31, 2026**.

Before starting any Work at the Site, Contractor must comply with the following:

Coordinate with Cemetery staff.

Owner: Town of Queensbury
By (signature): _____
Name (printed): _____
Title: _____
Date Issued: _____
Copy: Engineer

**SECTION 006113.13
PERFORMANCE BOND**

| | |
|---|---|
| <p>Contractor</p> <p>Name: _____</p> <p>Address <i>(principal place of business)</i>: _____</p> | <p>Surety</p> <p>Name: _____</p> <p>Address <i>(principal place of business)</i>: _____</p> |
| <p>Owner</p> <p>Name: Town of Queensbury</p> <p>Mailing address <i>(principal place of business)</i>: 742 Bay Road Queensbury, New York 12804</p> | <p>Contract</p> <p>Description <i>(name and location)</i>: Pine View Cemetery Sink Hole Repair General Construction Town of Queensbury, New York 12804</p> <p>Contract Price: _____</p> <p>Effective Date of Contract: _____</p> |
| <p>Bond</p> <p>Bond Amount: _____</p> <p>Date of Bond: _____ <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i></p> <p>Modifications to this Bond form: <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 16</p> | |
| <p>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.</p> | |
| <p>Contractor as Principal</p> | <p>Surety</p> |
| <p align="center"><i>(Full formal name of Contractor)</i></p> | <p align="center"><i>(Full formal name of Surety) (corporate seal)</i></p> |
| <p>By: _____ <i>(Signature)</i></p> | <p>By: _____ <i>(Signature)(Attach Power of Attorney)</i></p> |
| <p>Name: _____ <i>(Printed or typed)</i></p> | <p>Name: _____ <i>(Printed or typed)</i></p> |
| <p>Title: _____</p> | <p>Title: _____</p> |
| <p>Attest: _____ <i>(Signature)</i></p> | <p>Attest: _____ <i>(Signature)</i></p> |
| <p>Name: _____ <i>(Printed or typed)</i></p> | <p>Name: _____ <i>(Printed or typed)</i></p> |
| <p>Title: _____</p> | <p>Title: _____</p> |
| <p><i>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.</i></p> | |

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 006113.16
PAYMENT BOND**

| | |
|---|---|
| <p>Contractor</p> <p>Name: _____</p> <p>Address <i>(principal place of business)</i>: _____</p> | <p>Surety</p> <p>Name: _____</p> <p>Address <i>(principal place of business)</i>: _____</p> |
| <p>Owner</p> <p>Name: Town of Queensbury</p> <p>Mailing address <i>(principal place of business)</i>: 742 Bay Road Queensbury, New York 12804</p> | <p>Contract</p> <p>Description <i>(name and location)</i>: Pine View Cemetery Sink Hole Repair General Construction Town of Queensbury Queensbury, New York 12804</p> <p>Contract Price: _____</p> <p>Effective Date of Contract: _____</p> |
| <p>Bond</p> <p>Bond Amount: _____</p> <p>Date of Bond: _____ <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i></p> <p>Modifications to this Bond form: <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 18</p> | |
| <p>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.</p> | |
| Contractor as Principal | Surety |
| _____ <i>(Full formal name of Contractor)</i> | _____ <i>(Full formal name of Surety) (corporate seal)</i> |
| By: _____ <i>(Signature)</i> | By: _____ <i>(Signature)(Attach Power of Attorney)</i> |
| Name: _____ <i>(Printed or typed)</i> | Name: _____ <i>(Printed or typed)</i> |
| Title: _____ | Title: _____ |
| Attest: _____ <i>(Signature)</i> | Attest: _____ <i>(Signature)</i> |
| Name: _____ <i>(Printed or typed)</i> | Name: _____ <i>(Printed or typed)</i> |
| Title: _____ | Title: _____ |
| <p><i>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.</i></p> | |

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 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.
 - 6.1. Claimants who do not have a direct contract with the Contractor
 - 6.1.1. 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
 - 6.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 6.2. 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).
7. 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.

8. 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:
 - 8.1. 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
 - 8.2. Pay or arrange for payment of any undisputed amounts.
 - 8.3. 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.
9. 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. 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.
15. 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 here from 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.

16. 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.

17. Definitions

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

17.1.1. The name of the Claimant;

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

17.1.3. 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;

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

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

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

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

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

17.2. *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.

17.3. *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.

17.4. *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.

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

18. 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.

19. Modifications to this Bond are as follows: None.

Contractor's Application for Payment

| | |
|--|--|
| Owner: <u>Town of Queensbury</u> | Owner's Project No.: _____ |
| Engineer: <u>LaBella Associates, DPC</u> | Engineer's Project No.: <u>2240674.29</u> |
| Contractor: _____ | Contractor's Project No.: _____ |
| Project: <u>Pine View Cemetery Sink Hole Repair</u> | |
| Contract: <u>General Construction</u> | |

Application No.: _____ **Application Date:** _____

Application Period: From _____ to _____

| | | |
|--|----|---|
| 1. Original Contract Price | \$ | - |
| 2. Net change by Change Orders | \$ | - |
| 3. Current Contract Price (Line 1 + Line 2) | \$ | - |
| 4. Total Work completed and materials stored to date (Sum of Column G Lump Sum Total and Column J Unit Price Total) | \$ | - |
| 5. Retainage | | |
| a. _____ X \$ _____ Work Completed | \$ | - |
| b. _____ X \$ _____ Stored Materials | \$ | - |
| c. Total Retainage (Line 5.a + Line 5.b) | \$ | - |
| 6. Amount eligible to date (Line 4 - Line 5.c) | \$ | - |
| 7. Less previous payments (Line 6 from prior application) | | |
| 8. Amount due this application | \$ | - |
| 9. Balance to finish, including retainage (Line 3 - Line 4) | \$ | - |

Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:

(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;

(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor: _____

Signature: _____ **Date:** _____

| | |
|-----------------------------------|--------------------------|
| Recommended by Engineer | Approved by Owner |
| By: _____ | By: _____ |
| Title: _____ | Title: _____ |
| Date: _____ | Date: _____ |
| Approved by Funding Agency | |
| By: _____ | By: _____ |
| Title: _____ | Title: _____ |
| Date: _____ | Date: _____ |

Progress Estimate - Lump Sum Work

Contractor's Application for Payment

Owner: Town of Queensbury
 Engineer: LaBella Associates, DPC
 Contractor: _____
 Project: Pine View Cemetery Sink Hole Repair
 Contract: General Construction

Owner's Project No.: _____
 Engineer's Project No.: 2240674.29
 Contractor's Project No.: _____

Application No.: _____ Application Period: From _____ to _____ Application Date: _____

| A | B | C | D E | | F | G | H | I |
|--|-------------|----------------------|--|------------------|---|--|----------------------------------|--------------------------------|
| Item No. | Description | Scheduled Value (\$) | Work Completed | | Materials Currently Stored (not in D or E) (\$) | Work Completed and Materials Stored to Date (D + E + F) (\$) | % of Scheduled Value (G / C) (%) | Balance to Finish (C - G) (\$) |
| | | | (D + E) From Previous Application (\$) | This Period (\$) | | | | |
| Change Orders | | | | | | | | |
| | | | | | | - | | - |
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| | | | | | | - | | - |
| Change Order Totals | | \$ - | \$ - | \$ - | \$ - | \$ - | | \$ - |
| Original Contract and Change Orders | | | | | | | | |
| Project Totals | | \$ - | \$ - | \$ - | \$ - | \$ - | | \$ - |

Stored Materials Summary

Contractor's Application for Payment

| | | | |
|--------------------|-------------------------------------|----------------------------------|------------|
| Owner: | Town of Queensbury | Owner's Project No.: | |
| Engineer: | LaBella Associates, DPC | Engineer's Project No.: | 2240674.29 |
| Contractor: | | Contractor's Project No.: | |
| Project: | Pine View Cemetery Sink Hole Repair | | |
| Contract: | General Construction | | |

Application No.: _____ Application Period: From _____ to _____ Application Date: _____

| A | B | C | D | E | F | Materials Stored | | | Incorporated in Work | | | M | |
|---|-------------------------|---|---|------------------|--|-----------------------------------|--------------------------------------|--|--|---|--|---|---|
| Item No. (Lump Sum Tab) or Bid Item No. (Unit Price Tab) | Supplier Invoice No. | Submittal No. (with Specification Section No.) | Description of Materials or Equipment Stored | Storage Location | Application No. When Materials Placed in Storage | Previous Amount Stored (\$) | Amount Stored this Period (\$) | Amount Stored to Date (G+H) (\$) | Amount Previously Incorporated in the Work (\$) | Amount Incorporated in the Work this Period (\$) | Total Amount Incorporated in the Work (J+K) (\$) | Materials Remaining in Storage (I-L) (\$) | |
| | | | | | | | | | | | | | |
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| | | | | | | | | - | | | - | - | |
| Totals | | | | | | \$ | - | \$ | - | \$ | - | \$ | - |

SECTION 006516

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner: Town of Queensbury Owner's Project No.:
Engineer: LaBella Associates, DPC Engineer's Project No.: 2240674.29
Contractor: Contractor's Project No.:
Project: Pine View Cemetery Sink Hole Repair
Contract Name: General Construction

This [] Preliminary [] Final Certificate of Substantial Completion applies to:
[] All Work [] The following specified portions of the Work:

Date of Substantial Completion: September 30, 2026

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:

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By



Endorsed By



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GUIDELINES FOR USE OF EJCDC® C-700, STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

1.0 PURPOSE AND INTENDED USE OF THE DOCUMENT

EJCDC® C-700, Standard General Conditions of the Construction Contract (2018), is the foundation document for the EJCDC Construction Series. The General Conditions define the basic rights, responsibilities, risk allocations, and contractual relationship of the Owner and Contractor, and establish how the Contract is to be administered.

2.0 OTHER DOCUMENTS

EJCDC documents are intended to be used as a system and changes in one EJCDC document may require a corresponding change in other documents. Other EJCDC documents may also serve as a reference to provide insight or guidance for the preparation of this document.

These General Conditions have been prepared for use with either EJCDC® C-520, Agreement Between Owner and Contractor for Construction Contract (Stipulated Price), or EJCDC® C-525, Agreement Between Owner and Contractor for Construction Contract (Cost-Plus-Fee) (2018 Editions). The provisions of the General Conditions and the Agreement are interrelated, and a change in one may necessitate a change in the other.

To prepare supplementary conditions that are coordinated with the General Conditions, use EJCDC® C-800, Supplementary Conditions of the Construction Contract (2018).

The full EJCDC Construction series of documents is discussed in the EJCDC® C-001, Commentary on the 2018 EJCDC Construction Documents (2018).

3.0 ORGANIZATION OF INFORMATION

All parties involved in a construction project benefit significantly from a standardized approach in the location of subject matter throughout the documents. Experience confirms the danger of addressing the same subject matter in more than one location; doing so frequently leads to confusion and unanticipated legal consequences. Careful attention should be given to the guidance provided in EJCDC® N-122/AIA® A521, Uniform Location of Subject Matter (2012 Edition) when preparing documents. EJCDC® N-122/AIA® A521 is available at no charge from the EJCDC website, www.ejcdc.org, and from the websites of EJCDC's sponsoring organizations.

If CSI MasterFormat™ is used for organizing the Project Manual, consult CSI MasterFormat™ for the appropriate document number (e.g., under 00 11 00, Advertisements and Invitations), and accordingly number the document and its pages.

4.0 EDITING THIS DOCUMENT

Remove these Guidelines for Use. Some users may also prefer to remove the two cover pages.

Although it is permissible to revise the Standard EJCDC Text of C-700 (the content beginning at page 1 and continuing to the end), it is common practice to leave the Standard EJCDC Text of C-700 intact and unaltered, with modifications and supplementation of C-700's provisions set forth in EJCDC® C-800, Supplementary Conditions of the Construction Contract (2018). If the Standard Text itself is revised, the user must comply with the terms of the License Agreement, Paragraph 4.0, Document-Specific Provisions,

concerning the tracking or highlighting of revisions. The following is a summary of the relevant License Agreement provisions:

1. The term “Standard EJCDC Text” for C-700 refers to all text prepared by EJCDC in the main body of the document. Document covers, logos, footers, instructions, or copyright notices are not Standard EJCDC Text for this purpose.
2. During the drafting or negotiating process for C-700, it is important that the two contracting parties are both aware of any changes that have been made to the Standard EJCDC Text. Thus, if a draft or version of C-700 purports to be or appears to be an EJCDC document, the user must plainly show all changes to the Standard EJCDC Text, using “Track Changes” (redline/strikeout), highlighting, or other means of clearly indicating additions and deletions.
3. If C-700 has been revised or altered and is subsequently presented to third parties (such as potential bidders, grant agencies, lenders, or sureties) as an EJCDC document, then the changes to the Standard EJCDC Text must be shown, or the third parties must receive access to a version that shows the changes.
4. Once the document is ready to be finalized (and if applicable executed by the contracting parties), it is no longer necessary to continue to show changes to the Standard EJCDC Text. The user may produce a final version of the document in a format in which all changes are accepted, and the document at that point does not need to include any “Track Changes,” redline/strikeout, highlighting, or other indication of additions and deletions to the Standard EJCDC Text.

5.0 LICENSE AGREEMENT

This document is subject to the terms and conditions of the **License Agreement, 2018 EJCDC® Construction Series Documents**. A copy of the License Agreement was furnished at the time of purchase of this document, and is available for review at www.ejcdc.org and the websites of EJCDC’s sponsoring organizations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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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, expeditors, 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.

SECTION 007300

SUPPLEMENTARY CONDITIONS MODIFICATIONS TO GENERAL CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (EJCDC Document C-700, 2018 Edition) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

Articles and paragraphs herein bear numbers corresponding to those parts of the General Conditions that are being amended or supplemented.

ARTICLE 1 - Definitions and Terminology

The terms used in these Supplementary Conditions which are defined in the Standard General Conditions of the Construction Contract (EJCDC Document C-700, 2018 Edition) have the meanings assigned to them in the General Conditions.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF WORK

SC-4.01 *Commencement of Contract Times; Notice to Proceed*

Replace paragraph 4.01.A. with the following:

- A. The printed forms of Instructions, Suggested Bid Form, Agreement and General Conditions establish a schedule of events from the opening of bids to the date when the Contract Times must start to run.

The events contemplated by the proposed schedule may be summarized as follows:

- Day 1- Bid Opening
- Day 7 - Within seven (7) days of a request after bid opening, Bidder must submit to Owner a list of all Subcontractors, Suppliers, and others who must be identified for acceptance by Owner and Engineer prior to Notice of Award, as well as written evidence of Bidder's Qualifications.
- Day 45- Notice of Award must be given to Contractor by this date and accompanied by Agreement in form for signing and with all exhibits attached.
- Day 60- By this date (or within 15 days of delivery of Notice of Award) Contractor must return signed Agreement and other data to Owner. Failure to do so will involve sacrifice of Bid Security under.
- Day 70- By this date (or within 10 days of receipt of signed Agreement and other data from Contractor) Owner must sign and deliver to Contractor one signed counterpart of Agreement with all Exhibits attached. This is usually the Effective Date of the Agreement and the date on which the Contract Time starts running (see SC-4.01). However, it is contemplated that the date on which the agreement is to become effective will have been inserted in the Agreement (in space provided just above the signatures of the parties) before it is forwarded to the Contractor for signing.
- Day 70- The Contract Times must start running no later than this date (or 30 days after the Effective Date of the Agreement if that is earlier), but by use of a Notice to Proceed as contemplated by GC-4.01A they may start running earlier than that once the Agreement has been signed by both parties and has become effective.

ARTICLE 5 – SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

SC-5.03 *Subsurface and Physical Conditions*

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 |
|-------------------------|-----------------------|-----------------------|
| Geotechnical Assessment | 8/7/2024 | Subsurface conditions |
| | | |
| | | |

- 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 |
|-------------------------------------|-------------------------|---------------------------|
| Pine View Cemetery Sink Hole Repair | 5/22/2026 | Plans include site survey |
| | | |
| | | |

SC-5.03 *Owner’s Disclaimer – Drawings of Physical Conditions*

Add a new paragraph immediately after Article 5.03, Paragraph F. of the General Conditions as follows:

- G. The OWNER and the ENGINEER assume no responsibility or liability for the accuracy of information on existing structures.

This information was intended for Bid cost purposes only and is made available to bidders only that they may have access to identical information available. It is presented in good faith, but is not intended as a substitute for personal investigations, interpretations, or judgment of the CONTRACTOR. This information is not guaranteed and does not form part of the Contract Documents.

SC-5.06 *Hazardous Environmental Conditions*

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 |
|--------------|----------------|----------------|
| None | | |
| | | |
| | | |

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 |
|----------------|------------------|----------------|
| None | | |
| | | |
| | | |

ARTICLE 6 – BONDS AND INSURANCE

SC-6.01 *Performance, Payment, and Other Bonds*

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 (2018 edition).
2. *Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of EJCDC® C-615, Payment Bond (2018 edition).

SC-6.03 *Contractor’s Insurance*

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: **None**.
- E. *Workers’ Compensation and Employer’s Liability:* Contractor shall purchase and maintain workers’ compensation and employer’s liability insurance, including, as applicable, United States Longshoreman and Harbor Workers’ Compensation Act, Jones Act, and foreign voluntary workers’ compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

| Workers' Compensation and Related Policies | Policy limits of not less than: |
|---|--|
| Workers' Compensation | |
| State | Statutory |
| Applicable Federal (e.g., Longshoreman's) | Statutory |
| Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable | Statutory |
| Bodily injury by accident—each accident | \$100,000 |
| Bodily injury by disease—aggregate | \$500,000 |
| Employer's Liability | |
| Each employee | \$100,000 |

Any and all proprietors, partners, executive officers and members must be covered for Workers Compensation even if not required by NYS law to be covered. Certificates of Insurance must show that Workers Compensation is in effect and “N” must appear on the Certificate next to the question, “Any Proprietor/Partner/Executive Officer/Member Excluded”.

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 |
| Products—Completed Operations Aggregate | \$2,000,000 |
| Personal and Advertising Injury | \$1,000,000 |
| Bodily Injury and Property Damage—Each Occurrence | \$1,000,000 |

- 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: |
|---|--|
| 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 | \$2,000,000 |
| General Aggregate | \$2,000,000 |

- 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 **\$2,000,000** after accounting for partial attribution of its limits to underlying policies, as allowed above.

- M. *Contractor’s Pollution Liability Insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage, including cleanup costs, as a result of pollution conditions arising from Contractor’s operations and completed operations. This insurance must be maintained for no less than three years after final completion.

| Contractor’s Pollution Liability | Policy limits of not less than: |
|---|--|
| Each Occurrence/Claim | \$1,000,000 |
| General Aggregate | \$1,000,000 |

- N. *Contractor’s Professional Liability Insurance:* If Contractor will provide or furnish professional services under this *Contract*, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance must cover negligent acts, errors, or omissions in the performance of professional design or related services by the insured or others for whom the insured is legally liable. The insurance must be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. The retroactive date on the policy must pre-date the commencement of furnishing services on the Project.

| Contractor’s Professional Liability | Policy limits of not less than: |
|--|--|
| Each Claim | \$1,000,000 |
| Annual Aggregate | \$2,000,000 |

- O. *Owner’s Liability Insurance:* If Contractor will provide or furnish professional services under this *Contract*, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining additional liability insurance for the Owner and Engineer. The Contractor’s insurance carrier shall issue a *separate* Protective Liability Policy covering the Owner and Engineer. The insurance must be maintained throughout the duration of the Contract and for a minimum of two years after

Substantial Completion. The retroactive date on the policy must pre-date the commencement of furnishing services on the Project.

| Owner's Liability | Policy limits of not less than: |
|--------------------------|--|
| Bodily Injury | |
| Each Occurrence | \$1,000,000 |
| Property Damage | |
| Each Occurrence | \$1,000,000 |
| Annual Aggregate | \$2,000,000 |

The separate protective Liability Policy shall specifically name as the insureds the following parties:

The OWNER, specifically: Town of Queensbury

The ENGINEER, specifically LaBella Associates, DPC.

P. *Other Required Insurance: None*

ARTICLE 7 – CONTRACTOR’S RESPONSIBILITIES

SC-7.03 *Labor; Working Hours*

Add a new paragraph immediately after Paragraph 7.03.C. of the General Conditions as follows:

- D. During inclement, stormy, or freezing weather, no work shall be done, except as may be performed in a manner satisfactory to secure first-class construction and by permission of the ENGINEER. During freezing weather, approved precautions shall be taken to remove ice and frost from materials used and to prevent completed portions of the work from freezing by heating the water, sand, gravel, broken stone, bricks, or other materials and by covering and heating the completed portions of the work. The cost of such precautions shall be borne by the CONTRACTOR. If, in the opinion of the ENGINEER, any work or materials shall have been damaged or injured by reason of failure on the part of the CONTRACTOR or any Subcontractor to so protect their work, such work and materials shall be removed and replaced at the expense of the CONTRACTOR.

SC-7.07 *Concerning Subcontractors and Suppliers*

Replace paragraph 7.07.L of the General Conditions as follows:

- L. Owner or Engineer 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.

Add a new paragraph immediately after Paragraph 7.07.M of the General Conditions:

- N. After the contract is awarded, and thereafter any change of subcontractor or agreed-upon amount to be paid to each shall require the approval of the public owner, upon a showing presented to the public owner of legitimate construction need for such change, which shall be

open to public inspection. Legitimate construction need shall include, but not be limited to, a change in project specifications, a change in construction material costs, a change to subcontractor status as determined pursuant to paragraph (e) of subdivision two of section two hundred twenty-two of the labor law, or the subcontractor has become otherwise unwilling, unable or unavailable to perform the subcontract. The Owner and Engineer shall approve any such changes prior to the Contractor's execution of such change.

SC-7.10 *Sales Tax Exemptions*

Add a new paragraph immediately after Paragraph 7.10.A of the General Conditions:

B. Owner is exempt from payment of sales and compensating use taxes of the State of New York and of cities and counties thereof on all materials to be incorporated into the Work.

1. Owner will furnish, upon request, the required certificates of tax exemption to Contractor for use in the purchase of supplies and materials to be incorporated into the Work.

2. Owner's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Contractor, or to supplies or materials not incorporated into the Work.

SC-7.16.C *Engineer's Review of Shop Drawings and Samples*

Add a new paragraph immediately after Paragraph 7.16.C.8 of the General Conditions as follows:

9. ENGINEER's "review and approval" of submittals is only for review of general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Corrections and comments made on the shop drawings during this review do not relieve CONTRACTOR from compliance with requirements of the drawings and specifications. The CONTRACTOR is responsible for confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating CONTRACTOR's work with that of all other trades; and performing CONTRACTOR's work in a safe and satisfactory manner.

ARTICLE 8 – OTHER WORK AT THE SITE

SC- 8.03 *Legal Relationships*

Add a new paragraph immediately after Paragraph 8.03.C of the General Conditions as follows:

D. Should CONTRACTOR cause damage to the work or property of any separate contractor at the site, or should any claim arising out of CONTRACTOR's performance of the Work at the site be made by any separate contractor against CONTRACTOR, OWNER, ENGINEER, ENGINEER's Consultants, the Construction Coordinator or any other person, CONTRACTOR shall promptly attempt to settle with such other contractor by agreement, or to otherwise resolve the dispute by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold OWNER, ENGINEER, ENGINEER's Consultants and the Construction Coordinator harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any separate

contractor against OWNER, ENGINEER, ENGINEER's Consultants or the Construction Coordinator to the extent based on a claim arising out of CONTRACTOR's performance of the Work. Should a separate contractor cause damage to the Work or property of CONTRACTOR or should the performance of Work by any separate contractor at the site give rise to any other claim, CONTRACTOR shall not institute any action, legal or equitable, against OWNER, ENGINEER, ENGINEER's Consultants or the Construction Coordinator or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability or to recover damages from OWNER, ENGINEER, ENGINEER's Consultants or the Construction Coordinator on account of any such damage or claim. If CONTRACTOR is delayed at any time in performing or furnishing Work by any act or neglect of a separate contractor and OWNER and CONTRACTOR are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, CONTRACTOR may make a claim for an extension of times in accordance with Article 12. An extension of the Contract Times shall be CONTRACTOR's exclusive remedy with respect to OWNER, ENGINEER, ENGINEER's Consultants and Construction Coordinator for any delay, disruption, interference or hindrance caused by any separate contractor. This paragraph does not prevent recovery from OWNER, ENGINEER, ENGINEER's Consultant or Construction Coordinator for activities that are their respective responsibilities.

ARTICLE 11 – CHANGES TO THE CONTRACT

SC-11.07 *Contractor's Fee*

Delete Paragraphs 11.07.C.2.b and 11.07.C.2.c of the General Conditions in its entirety and insert the following in its place:

- b. For costs incurred under Paragraph 13.01.B.3, the CONTRACTOR's fee shall be 10% for combined overhead and profit; and if a subcontract is on the basis of Cost of the Work Plus a Fee, the maximum allowable to the Subcontractor as a fee shall be 5% for overhead plus 10% for profit.

ARTICLE 13 – COST OF WORK; ALLOWANCES, UNIT PRICE WORK

13.01 *Cost of the Work*

Supplement Paragraph 13.01.B.5.c.(2) by adding the following sentence:

Equipment, excluding “small tools and hand tools” which are defined as tools and equipment having a new purchase price of less than \$1,000, and which will be used exclusively and directly on the Work. For the purposes of computing the Contractor’s cost for self-owned equipment, the rate used for periods of under five days shall be the monthly rate set forth for the item of equipment in the Equipment Watch® “Rental Rate Blue Book” published by Penton Media (800 669-3282) divided by 22 days to establish a **daily rate** and divided again by eight hours to establish an **hourly rate**. **The rate used for periods of 5 days or more shall be 45% of the published monthly rate.** In the event the “Rental Rate Blue Book” does not list the item of equipment used, the applicable rate shall be determined in the same manner as set forth above except that the monthly rate used shall be that set forth in “The AED Green Book” published by Penton Media (800 669-3282). In the event that a rate is not established in the “Rental Rate Blue Book” or “The AED Green Book” for a particular piece of equipment, the Contracting Officer shall establish a rate for ownership costs and operating costs for that piece of equipment that is consistent with its cost and expected life. Self-owned equipment is defined to include equipment rented from controlled or affiliated companies.

Add a new paragraph immediately after paragraph 13.01.B.5.c.(3) of the General Conditions to read as follows:

- 4) Equipment used or to be used in the performance of Work shall be specifically described by the manufacturer, model number and date of manufacture and be of suitable size and capacity required for the work to be performed.

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 \$1,000.

ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

SC-15.01 *Progress Payments*

Add a new paragraph immediately after paragraph 15.01.B.1 of the General Conditions to read as follows:

Completed Work shall be defined as Work completed, tested, and accepted. Payment for completed Work will be made to the CONTRACTOR based on a payment estimate prepared by the CONTRACTOR and duly certified and approved by the ENGINEER. No payment for any part of any Work not completed, tested, and accepted in the preceding calendar month shall be made, except at the discretion of the ENGINEER with the approval of the OWNER.

SC-15.01 *Progress Payments*

Add the following immediately after paragraph 15.01.C.6 of the General Conditions

- f. Additional reasons ENGINEER may refuse to recommend the whole or any part of any payment, or nullify any such payment previously recommended, all in accordance with paragraph 14.07 of the General Conditions, are to protect OWNER from loss because:
 - 1. of injury to persons, or damage to the work or property of other contractors, subcontractors, or others caused by the act or neglect of the CONTRACTOR or any of CONTRACTOR's Subcontractors; or
 - 2. of CONTRACTOR's failure to make payment to Subcontractors or Suppliers, or for labor; or
 - 3. Liability for liquidated damages has been incurred by CONTRACTOR (when the Agreement includes such liquidated damage provisions).

The OWNER shall have the right to apply any such amounts so withheld in such manner as the OWNER may deem proper to satisfy such claims or to secure protection. Such application of such money shall be deemed payment to the account of the CONTRACTOR.

SC-15.02 *Contractor's Warranty of Title*

Add the following sentence at the end of paragraph 15.02.A of the General Conditions:

If requested by the OWNER, the CONTRACTOR shall furnish to the OWNER confirmatory bills of sale and other instruments as may be required by the OWNER, properly executed, confirming to the OWNER, title to such materials free of encumbrances.

SC-15.06 *Final Payment*

Amend paragraph 15.06.A.2 of the General Conditions to read as follows, and as so amended the paragraph remains in effect:

- 2. The final Application for Payment shall be accompanied (except as previously delivered) by: (a) all documentation called for in the Contract Documents and by such other data and schedules as ENGINEER may reasonably require, including but not limited to releases and waivers of liens from all Subcontractors and Suppliers, consent of surety to final payment, certificates of insurance evidencing continuation of coverages required to survive final payment, and final lien waivers.

SC-15.08 *Correction Period*

Revise Paragraph 15.08.A. to read as follows:

- A. If within one year after the date of Final Payment and Acceptance (not Substantial Completion), 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:

END OF SECTION-007300

**SECTION 007310
SUPPLEMENTARY CONDITIONS
ADDITIONAL ARTICLES**

These Supplementary Conditions add new topics to the Standard General Conditions of the Construction Contract (EJCDC Document C-700, 2018 Edition) and other provisions of the Contract Documents.

Articles and paragraphs herein are numbered as a continuation of the General Conditions. Some numbers in sequence may not appear because those numbered Articles and paragraphs are not applicable to this Project and have been deleted when transferring this Section from the office master document.

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Article 19 - PROVISIONS REQUIRED BY LAW DEEMED INSERTED

19.01 Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein, and the Contract shall read and be enforced as though it were included herein, and if through mistake or otherwise, any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion.

Article 20 - NEW YORK STATE NONDISCRIMINATION CLAUSES

20.01 During the performance of this Contract, the CONTRACTOR agrees as follows:

- A. The CONTRACTOR shall not discriminate against any employee or applicant for employment because of race, creed, color, or national origin, and will take affirmative action to insure that they are afforded equal employment opportunities without discrimination because of race, creed, color or national origin. Such action shall be taken with reference but not limited to: recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff or termination, rates of pay or other forms of compensation, and selection for training or retraining, including apprenticeship and on-the-job training.
- B. The CONTRACTOR will send to each labor union or representative of workers with which CONTRACTOR has or is bound by a collective bargaining or other agreement or understanding, a notice, to be provided by the State Commission for Human Rights, advising such labor union or representative of the CONTRACTOR's agreement under Paragraph 20.01 hereinafter called "nondiscrimination clauses". If the CONTRACTOR was directed to do so by the contracting agency as part of the bid or negotiation of this Contract, the CONTRACTOR shall request the labor union or representative to furnish CONTRACTOR with a written statement that such labor union or representative will not discriminate because of race, creed, color or national origin and that such labor union or representative either will affirmatively cooperate within the limits of its legal and contractual authority in the implementation of the policy and provisions of these nondiscrimination clauses, or that it consents and agrees that recruitment, employment, and the terms and conditions of employment under this contract shall be in accordance with the purposes and provisions of these nondiscrimination clauses. If such labor union or representative fails or refuses to comply with such a request that it furnish such a statement, the CONTRACTOR shall promptly notify the State Commission for Human Rights of such failure of refusal.
- C. The CONTRACTOR will post and keep posted in conspicuous places, available to employees and applicants for employment, notices to be provided by the State Commission for Human Rights setting forth the substance of the provisions of clauses (20.01.A) through (20.01.B) and such provisions of the State's Laws against discrimination as the State Commission for Human Rights shall determine.
- D. The CONTRACTOR will state, in all solicitations or advertisements for employees placed by or on behalf of the CONTRACTOR, that all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color or national origin.
- E. The CONTRACTOR will comply with the provisions of the Executive Law, Human Rights Law, Article 15, and will furnish all information and reports deemed necessary by the State Commission for Human Rights under these nondiscrimination clauses and such sections of the

Executive Law, and will permit access to the CONTRACTOR's books, records and accounts by the State Commission for Human Rights, the Attorney General, District Commissioner of Housing and Community Renewal and the Industrial Commission for purposes of investigation to ascertain compliance with these nondiscrimination clauses of the Executive Law, Human Rights Law, Article 15.

- F. This Contract may be forthwith cancelled, terminated or suspended, in whole or in part by the contracting agency upon the basis if a finding made by the State Commission for Human Rights that the CONTRACTOR has not complied with these nondiscrimination clauses, and the CONTRACTOR may be declared ineligible for future contracts made by or on behalf of the State or a public authority or agency of the State or housing authority, or an urban renewal agency, or contract requiring the approval of the Commissioner of Housing and Community Renewal, until CONTRACTOR has satisfied the State Commission for Human Rights after conciliation efforts by the Commission have failed to achieve compliance with these nondiscrimination clauses and after a verified complaint has been filed with the Commission, notice thereof has been afforded CONTRACTOR to be heard publicly before three members of the Commission. Such sanctions may be imposed and remedies invoked independently of or in addition to sanctions and remedies otherwise provided by law.
- G. If this Contract is cancelled or terminated, in addition to other rights of the contracting agency provided in this Contract upon its breach by the CONTRACTOR, the CONTRACTOR will hold the contracting agency harmless against any additional expenses or costs incurred by the contracting agency in completing the work or in purchasing the services, materials, equipment or supplies contemplated by the Contract, and the contracting agency may withhold payments from the Contractor in an amount sufficient for this purpose and recourse may be had against the surety on the performance bond if necessary.
- H. The CONTRACTOR will include the provisions of this article in every subcontract or purchase order altered only to reflect the proper identity of the parties in such manner that such provisions will be binding upon each subcontractor or vendor as to operations to be performed within the State of New York. The CONTRACTOR will take such actions in enforcing such provisions of such subcontract or purchase order as the contracting agency may direct, including sanctions or remedies for non-compliance. If the CONTRACTOR becomes involved in or is threatened with litigation with a subcontractor or vendor as a result of such direction by the contracting agency the CONTRACTOR shall promptly so notify the Attorney General, requesting him to intervene and to protect the interests of the State of New York.

Article 21 - NEW YORK STATE NON-COLLUSIVE BIDDING CERTIFICATION

21.01 In addition to the other provisions herein contained to be done or performed by the CONTRACTOR as part of this Contract, the said CONTRACTOR certifies, pursuant to the provisions of Section 103-d of the New York State General Municipal Law that:

- A. By submission of this Bid, each Bidder and such person signing on behalf of any Bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of their knowledge and belief:
- B. The prices in this Bid have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any competitor; and

- C. Unless otherwise required by law, the prices which have been quoted in this Bid have not knowingly be disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to opening, directly or indirectly, to any other Bidder or to any competitor; and
- D. No attempt has been made or will be made by the Bidder to induce any other person, partnership or corporation to submit or not to submit a Bid for the purpose of restricting competition.
 - 1. A Bid shall not be considered for award nor shall any award be made where A, B, and C, above have not been complied with; provided however, that if in any case the Bidder cannot make the foregoing certification, the Bidder shall so state and shall furnish with the Bid a signed statement which sets forth in detail the reasons therefore. Where A and C above have not been complied with, the Bid shall not be considered for award nor shall any award be made unless the head of the purchasing unit of the political subdivision, public department, agency or official thereof to which the Bid is made, or their designee, has determined that such disclosure was not made for the purpose of restricting competition.
- E. The fact that a Bidder (1) has published price lists, rates or tariffs covering items being procured, (2) has informed prospective customers of proposed or pending publication of new or revised price lists for such items, or (3) has sold the same items to other customers at the same prices being Bid, does not constitute, without more, a disclosure within the meaning of subparagraph (A).
- F. Any Bid hereafter made to any political subdivision of state or any public department, agency or official thereof by a corporate bidder for work or services performed or to be performed or goods sold or to be sold, where competitive bidding is required by statute, rule, regulation, or local law, and where such bid contains the certification referred to in subdivision (A) of this section, shall be deemed to have been authorized by the board of directors of the Bidder, and such authorization shall be deemed to include the signing and submission of the bid and the inclusion therein of the certificate as to non-collusion as the act and deed of the corporation.

Article 22 - WAGE RATES

22.01 New York State Rates

- A. New York State prevailing wage rate schedules are included as an appendix to these Bid Documents.
- B. The labor on this Contract shall be performed in all respects in full accordance with the Labor Law of the State of New York. In accordance with Section 220, Subdivision 3, and Section 220-D, of the Labor Law, the Industrial Commissioner has designated as the minimum hourly rates to be paid to employees on this work the rates shown on the attached schedules which shall be posted in a prominent and convenient place for the inspection of the CONTRACTOR's employees. Article 8, Section 220 of the Labor Law, as amended by Chapter 750 of the Laws of 1956, provides, among other things, that it shall be the duty of the fiscal officer to make a determination of the schedule of wages and supplements to be paid to all laborers, workmen and mechanics employed on public work projects. The amount of supplements listed on the enclosed schedule does not necessarily include all types of prevailing supplements.
- C. The CONTRACTOR shall make provision for disability benefits, workmen's compensation, unemployment insurance and social security, as required by law.

Article 23 - PROTECTION OF EXISTING FACILITIES

- 23.01 The CONTRACTOR shall conduct CONTRACTOR's operations and take all special temporary and permanent precautions necessary to insure a stable and secure job, and as may be required by the contract documents, the ENGINEER, the OWNER, and the public utilities, to protect and sustain in normal service all existing structures, equipment, utility lines, roadways and subsurface, submerged and overhead facilities which are to remain in place and undisturbed by CONTRACTOR's operations under this Contract completely at CONTRACTOR's own expense, unless otherwise provided for in the contract documents. The CONTRACTOR shall be held accountable for damage resulting from failure to exercise proper judgment in the progress of the work.
- A. When power poles, light poles, pipes or portions of any other existing structures, or utilities, either visible or underground, constitute an avoidable interference to CONTRACTOR's operations, the CONTRACTOR shall consult with the owner of such facility prior to performing any work at or near the same. If permitted by the owner of the facility, the CONTRACTOR shall relocate or temporarily remove, and later restore, the interfering portion of the facility, as directed by said owner and the project OWNER, through the ENGINEER. If the owner of the facility so elects, they will perform such work with their own forces. Under either arrangement, the work shall be done at the CONTRACTOR's expense unless stated otherwise in the Contract Documents.
 - B. The CONTRACTOR shall immediately notify the ENGINEER, OWNER and the owner of any facilities which are exposed, disturbed, damaged or injured as a result of the CONTRACTOR's operations. The CONTRACTOR shall consult with the owner of such facility as to the proper method of replacing, repairing, or restoring the affected facilities to the conditions which existed prior to the CONTRACTOR's operations. If permitted by the owner of the facility, the CONTRACTOR shall, at CONTRACTOR's own expense, replace, repair, or restore affected facilities to their original condition, to the satisfaction of said owner.
 - C. In the event that the owner of the facility desires to use their own forces to perform the replacement, repairing or restoring of affected facilities, the CONTRACTOR shall reimburse the owner of said facilities for such expenses as said owner may accrue in performing such work. The CONTRACTOR shall not be entitled to receive additional compensation under this Contract for such work.
 - D. Upon learning of the existence and location of any utility omitted from or shown incorrectly on the contract drawings the CONTRACTOR shall notify the utility owner and the ENGINEER and assumes full responsibility for that utility's protection or relocation as described above.

Article 24 - MATERIALS FOUND AT THE SITE

- 24.01 All timber, fences, buildings, stone, sand, gravel, utility lines, pipes, and any other appurtenances, materials, or articles of value found on lands or in excavations within the contract limits shall be brought to the attention of the ENGINEER.
- A. If such items are found in or upon lands of the OWNER, they shall remain the property of the OWNER. Such materials may, therefore, be used by the CONTRACTOR in the work at the discretion of the ENGINEER or the OWNER, for purposes for which they are acceptable. If

not otherwise claimed by the OWNER or OWNER's representatives, such items shall be considered waste and shall be disposed of by the CONTRACTOR as stipulated hereafter.

- B. If such items are found in or upon lands or easements being used in the project but being owned by parties other than the OWNER, they shall remain the property of such other owners. If claimed by these owners, the items shall be turned over to these owners at the site of the work as the ENGINEER directs. If such items are not claimed by these owners, they may similarly be used in the work as stipulated in the preceding paragraph, or be considered waste and be disposed of by the CONTRACTOR as stipulated hereafter.
- C. Disposal of waste materials shall be the CONTRACTOR's responsibility as an integral part of the Contract and shall be done without special payment from the OWNER. The decision as to whether disposal takes place inside or outside of the project limits shall be subject to control by the ENGINEER. If disposal takes place within the project limits, it shall be done by the CONTRACTOR subject to the direction and satisfaction of the ENGINEER. Waste material shall not be sold to parties within the project limits. If disposal takes place outside the project limits, it shall be done by the CONTRACTOR exclusively at the CONTRACTOR's discretion and be solely CONTRACTOR's responsibility. The CONTRACTOR will be required to show the ENGINEER how CONTRACTOR plans to dispose of the waste (i.e., unsuitable backfill, rock, etc.) in an environmentally acceptable manner. The ENGINEER will require copies of release forms from property owners who have agreed with CONTRACTOR to accept spoil materials. All construction, demolition and solid waste materials as classified by NYSDEC, part 360, regulations shall be properly disposed of in accordance with part 360 regulations at CONTRACTOR's expense.

Article 25 - USE AND PROTECTION OF WATERS IN NEW YORK STATE

25.01 The CONTRACTOR is advised that any work or operations which in any way disturb or affect the streambed or banks of any stream which is classified by the New York State Departmental of Environmental Conservation falls under the control and supervision of the Department of Environmental Conservation. In compliance with the law, the CONTRACTOR will be required to contact the Local Permit Agent of NYSDEC and advise them of CONTRACTOR's intent to impact said stream. They will then advise the CONTRACTOR of the procedures and conditions to be followed, if any, in making the stream crossings and/or working on the banks of the stream.

Article 26 – PROJECT SPECIFIC PERMITS

26.01 The following project-specific permits have been obtained by the Owner, and are included as appendices to these bid documents:

- A. US Army Corps of Engineers Nationwide Permit No. NAN-2026-00105-TREC
- B. NYS Department of Environmental Conservation Permit No. 5-5234-00028/00007 (FW, SD)

Article 27 – IRAN DIVESTMENT CERTIFICATION

27.01 Each Bidder is required to execute and submit with its Bid the Iran Divestment Act Certification (Section 004540), certifying in accordance with State Finance Law § 165-a that the Bidder is not on the "Entities Determined to be Non-Responsive Bidders/Offerers pursuant to the New York State Iran Divestment Act of 2012" ("Prohibited Entities List") posted at: <https://ogs.ny.gov/iran->

[divestment-act-2012](#). By entering into this Agreement, CONTRACTOR reaffirms the certification submitted with its Bid.

- 27.02 CONTRACTOR further certifies that is will not utilize on this Contract any subcontractor that is identified on the Prohibited Entities List. CONTRACTOR agrees that should it seek to renew or extend this Contract, it must provide the same certification at the time the Contract is renewed or extended. CONTRACTOR also agrees that any proposed Assignee of this Contract will be required to certify that it is not on the Prohibited Entities List before the contract assignment is approved by the OWNER.
- 27.03 During the term of the Contract, should the OWNER receive information that a person (as defined in State Finance Law § 165-a) is in violation of the above-referenced certification, the OWNER will review such information and offer the person an opportunity to respond. If the person fails to demonstrate that it has ceased its engagement in the investment activity which is in violation of the Act within ninety (90) days after the determination of such violation, then the OWNER shall take such action as may be appropriate and provided for by law, rule, or contract, including, but not limited to, imposing sanctions, seeking compliance, recovering damages, or declaring the CONTRACTOR in default.
- 27.04 The OWNER reserves the right to reject any bid, request for assignment, renewal, or extension for an entity that appears on the Prohibited Entities List prior to the award, assignment, renewal, or extension of a contract, and to pursue a responsibility review with respect to any entity that is awarded a contract and appears on the Prohibited Entities list after contract award.

END OF SECTION-007310

SECTION 011100

SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: **Pine View Cemetery Embankment Repair, located at 27 Quaker Road, Town of Queensbury, Warren County, New York**
 - 1. Owner: **Town of Queensbury, 742 Bay Road, Queensbury, New York 12804**
- B. Engineers Identification: The Contract Documents were prepared for the Project by LaBella Associates, D.P.C., 20 Elm Street, Suite 110, Glens Falls, New York 12801
- C. The work includes, but is not limited to, the following:
 - 1. Removal and replacement of the existing pond embankment located in the Pine View Cemetery, including replacement of the pond level control structures, and reconstruction of the access drive over the embankment.

1.3 CONTRACT

- A. Project consists of the following separate contracts:
 - Contract 1 – General Construction
- B. Items noted “NIC” (Not-In-Contract), will be furnished and installed by others.

1.4 WORK SEQUENCE

- A. The Work shall be conducted in one single phase. Coordinate construction schedule and operations with Owner and Engineer.

1.5 CONTRACTOR USE OF PREMISES

- A. Limited use of premises for work and for construction operations, to allow for Owner occupancy, work by others and public access.
- B. Coordinate use of premises under direction of Owner and Engineer.

1.6 OWNER OCCUPANCY

- A. Owner will occupy premises during entire period of construction, stage of construction. Cooperate with Owner and Engineer to minimize conflict and facilitate Owner's operations.

1.7 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 50-division format and CSI/CSC's "MasterFormat" numbering system.
 - 1. Section Identification: The Specifications use section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of sections in the Contract Documents.
- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
 - 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION-011100

SECTION 011400

WORK RESTRICTIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 USE OF PREMISES

- A. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of site beyond areas in which the Work is indicated.
 - 1. Limits: Confine construction operations to areas as shown on Contract Drawings. No work outside of the road right of way is permitted.
 - 2. Driveways and Entrances: Keep driveways and entrances serving properties affected by the Work clear and available to the property owners, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- B. Noise: Contractor shall not perform work in excess of 65 dBA outside of allowable work hours.
 - 1. Limits: Allowable work hours are defined as 8:00 AM to 5:00 PM, Monday through Friday. No work with excessive noise shall be permitted on Saturday or Sunday.
 - 2. Noise determined by measured value by a sound meter at a distance of 20 feet from the work being performed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION-011400

SECTION 012600

CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.

1.2 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
- B. Section 016000 - Product Requirements.

1.3 MINOR CHANGES IN THE WORK

- A. Engineer will issue through Project Representative supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, in the form of a written Field Order (EJCDC form C-942) in accordance with Paragraph 11.02 of the General Conditions.

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Engineer will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal Requests issued by Engineer are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

- B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to Engineer.
1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 4. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 5. Comply with requirements in Division 01 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.

1.5 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Proposal Request, Engineer will issue a Change Order for signatures of Owner and Contractor on EJCDC form C-941 included as Section 012663.

1.6 CONSTRUCTION CHANGE DIRECTIVE

- A. Work Change Directive: Engineer may issue a Work Change Directive on EJCDC form C-940 included as Section 012649. Work Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
1. Work Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Work Change Directive.
1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION-012600

SECTION 012639

FIELD ORDER NO.: [Number of Field Order]

| | | | |
|----------------|-------------------------------------|--------------------------------|------------|
| Owner: | Town of Queensbury | Owner's Project No.: | |
| Engineer: | LaBella Associates, DPC. | Engineer's Project No.: | 2240674.29 |
| Contractor: | | Contractor's Project No.: | |
| Project: | Pine View Cemetery Sink Hole Repair | | |
| Contract Name: | General Construction | | |
| Date Issued: | | Effective Date of Field Order: | |

Contractor is hereby directed to promptly perform the Work described in this Field Order, issued in accordance with Paragraph 11.04 of the General Conditions, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

Reference:

Specification Section(s):

Drawing(s) / Details (s):

Description:

[Description of the change to the Work]

Attachments:

[List documents supporting change]

Issued by Engineer

By: _____

Title: _____

Date: _____

SECTION 012649

WORK CHANGE DIRECTIVE NO.: [Number of Work Change Directive]

Owner: Town of Queensbury Owner's Project No.:
Engineer: LaBella Associates, DPC. Engineer's Project No.: 2240674.29
Contractor: Contractor's Project No.:
Project: Pine View Cemetery Sink Hole Repair
Contract Name: General Construction
Date Issued: Effective Date of Work Change Directive:

Contractor is directed to proceed promptly with the following change(s):

Description:

[Description of the change to the Work]

Attachments:

[List documents related to the change to the Work]

Purpose for the Work Change Directive:

[Describe the purpose for the change to the Work]

Directive to proceed promptly with the Work described herein, prior to agreeing to change in Contract Price and Contract Time, is issued due to:

Notes to User—Check one or both of the following

Non-agreement on pricing of proposed change. Necessity to proceed for schedule or other reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price: \$ _____ **[increase] [decrease] [not yet estimated].**

Contract Time: _____ days **[increase] [decrease] [not yet estimated].**

Basis of estimated change in Contract Price:

Lump Sum Unit Price Cost of the Work Other

Recommended by Engineer

Authorized by Owner

By:

Title:

Date:

SECTION 012663

CHANGE ORDER NO.: [Number of Change Order]

| | | | |
|----------------|-------------------------------------|---------------------------------|------------|
| Owner: | Town of Queensbury | Owner's Project No.: | |
| Engineer: | LaBella Associates, DPC. | Engineer's Project No.: | 2240674.29 |
| Contractor: | | Contractor's Project No.: | |
| Project: | Pine View Cemetery Sink Hole Repair | | |
| Contract Name: | General Construction | | |
| Date Issued: | | Effective Date of Change Order: | |

The Contract is modified as follows upon execution of this Change Order:

Description:

[Description of the change]

Attachments:

[List documents related to the change]

| Change in Contract Price | Change in Contract Times [State Contract Times as either a specific date or a number of days] |
|---|---|
| Original Contract Price: \$ _____ | Original Contract Times: Substantial Completion: _____ Ready for final payment: _____ |
| [Increase] [Decrease] from previously approved Change Orders No. 1 to No. [Number of previous Change Order] : \$ _____ | [Increase] [Decrease] from previously approved Change Orders No.1 to No. [Number of previous Change Order] : Substantial Completion: _____ Ready for final payment: _____ |
| Contract Price prior to this Change Order: \$ _____ | Contract Times prior to this Change Order: Substantial Completion: _____ Ready for final payment: _____ |
| [Increase] [Decrease] this Change Order: \$ _____ | [Increase] [Decrease] this Change Order: Substantial Completion: _____ Ready for final payment: _____ |
| Contract Price incorporating this Change Order: \$ _____ | Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for final payment: _____ |

Recommended by Engineer

Accepted by Contractor

By: _____

Title: _____

Date: _____

Authorized by Owner

Approved by Funding Agency (if applicable)

By: _____

Title: _____

Date: _____

SECTION 012900

PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.2 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.
- B. Section 012600 - Contract Modification Procedures.
- C. Section 013200 - Construction Progress Documentation.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
 - 1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with Continuation Sheets.
 - b. Submittals Schedule.
 - 2. Submit the Schedule of Values to Engineer through Project Representative at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
 - 3. Sub-schedules: Where the Work is separated into phases requiring separately phased payments, provide sub-schedules showing values correlated with each phase of payment.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.

1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of Engineer.
 - c. Engineer's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.

2. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division.
 - b. Description of the Work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Orders (numbers) that affect value.
 - g. Dollar value.
 - 1) Percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.

3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. Include evidence of insurance or bonded warehousing if required.

6. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
7. Allowances: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
8. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.

9. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Engineer and paid for by Owner.
 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is the 15th day of each month. The period covered by each Application for Payment starts on the day following the end of the preceding period and ends 15 days before the date for each progress payment.
- C. Certified Payrolls: Contractor shall provide certified payrolls as attachments to each original copy of the application for payment.
- D. Payment Application Forms: EJCDC Document C-620 or other standard form as approved by Engineer for Applications for Payment.
- E. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Engineer will return incomplete applications without action.
 1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- F. Transmittal: Submit 5 signed and notarized original copies of each Application for Payment to Engineer by a method ensuring receipt. One copy shall include waivers of lien and similar attachments if required.
 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from every entity who is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
 1. Submit partial waivers on each item for amount requested, before deduction for retainage, on each item.
 2. When an application shows completion of an item, submit final or full waivers.

3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 4. Waiver Delays: Submit each Application for Payment with Contractor's waiver of mechanic's lien for construction period covered by the application.
 - a. Submit final Application for Payment with, or preceded by, final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
 5. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.
- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of Values.
 3. Contractor's Construction Schedule (preliminary if not final).
 4. Products list.
 5. Schedule of unit prices.
 6. Submittals Schedule (preliminary if not final).
 7. List of Contractor's staff assignments.
 8. List of Contractor's principal consultants.
 9. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
- I. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- J. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
 6. AIA Document G707, "Consent of Surety to Final Payment."

7. Evidence that claims have been settled.
8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
9. Final, liquidated damages settlement statement.
10. Transmittal of As-Built drawings in digital and hard copy format.
11. Evidence that temporary facilities, surplus materials, rubbish and contractor owned equipment and machinery have been removed from the site.
12. Pile driving records.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION-012900

SECTION 013100

PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General project coordination procedures.
 - 2. Conservation.
 - 3. Coordination Drawings.
 - 4. Administrative and supervisory personnel.
 - 5. Project meetings.

1.2 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.
- B. Section 013200 - Construction Progress Documentation.
- C. Section 017000 - Execution Requirements.
- D. Section 017700 - Closeout Procedures.

1.3 COORDINATION

- A. Coordination: Coordinate construction operations included in various Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
- B. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of Contractor's Construction Schedule.
 - 2. Preparation of the Schedule of Values.
 - 3. Installation and removal of temporary facilities and controls.
 - 4. Delivery and processing of submittals.
 - 5. Progress meetings.
 - 6. Preinstallation conferences.

7. Project closeout activities.

C. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work.

1.4 SUBMITTALS

A. Staff Names: Within 15 days of starting construction operations, submit a list of principal staff assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1. Post copies of list in Project meeting room, in temporary field office, and by each temporary telephone.

1.5 PROJECT MEETINGS

A. General: Engineer will schedule and conduct meetings and conferences at Project site, unless otherwise indicated.

1. Agenda: Engineer will prepare the meeting agenda and distribute the agenda to all invited attendees.

2. Minutes: Engineer will record significant discussions and agreements achieved and distribute the meeting minutes to everyone concerned.

B. Preconstruction Conference: A preconstruction conference will be scheduled before starting construction, at a time convenient to Owner, Engineer, Funding Agencies and Regulatory Agencies, but no later than 30 days after execution of the Agreement.

1. Attendees: Authorized representatives of Owner, Engineer, and their consultants; Contractor and its superintendent; major subcontractors; manufacturers and suppliers. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

2. Agenda: Discuss items of significance that could affect progress, including the following:

- a. Tentative construction schedule.
- b. Phasing.
- c. Critical work sequencing.
- d. Designation of responsible personnel.
- e. Procedures for processing field decisions and Change Orders.
- f. Procedures for processing Applications for Payment.
- g. Distribution of the Contract Documents.
- h. Submittal procedures.
- i. Preparation of Record Documents.
- j. Use of the premises.

- k. Responsibility for temporary facilities and controls.
- l. Parking availability.
- m. Office, work, and storage areas.
- n. Equipment deliveries and priorities.
- o. First aid.
- p. Security.
- q. Progress cleaning.
- r. Working hours.

C. Progress Meetings: Conduct progress meetings at monthly intervals. Coordinate dates of meetings with preparation of payment requests.

- 1. Attendees: In addition to representatives of Owner and Engineer, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
- 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Work hours.
 - 10) Hazards and risks.
 - 11) Progress cleaning.
 - 12) Quality and work standards.
 - 13) Change Orders.
 - 14) Documentation of information for payment requests.
- 3. Reporting: Engineer will distribute minutes of the meeting to each party present and to parties who should have been present.
 - a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 013200

CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Preliminary Construction Schedule.
 - 2. Contractor's Construction Schedule.
 - 3. Submittals Schedule.
 - 4. Daily construction reports.
 - 5. Material location reports.
 - 6. Field condition reports.
 - 7. Special reports.

1.2 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.
- B. Section 012900 - Payment Procedures.
- C. Section 013100 - Project Management and Coordination.
- D. Section 013300 - Submittal Procedures.
- E. Section 014000 - Quality Requirements.
- F. Section 017700 - Closeout Procedures

1.3 SUBMITTALS

- A. Submittals Schedule: Submit an electronic copy of the schedule to the Engineer. Arrange the following information in a tabular format:
 - 1. Scheduled date for first submittal.
 - 2. Specification Section number and title.
 - 3. Submittal category (action or informational).
 - 4. Name of subcontractor.
 - 5. Description of the Work covered.
 - 6. Scheduled date for Engineer's final release or approval.
- B. Preliminary Construction Schedule: Submit one electronic copy to the Engineer.

- C. Contractor's Construction Schedule: Submit one electronic copy to the Engineer showing entire schedule for entire construction period.
 - 1. Earnings Report: Compilation of Contractor's total earnings from the Notice to Proceed until most recent Application for Payment.

1.4 QUALITY ASSURANCE

- A. Pre-scheduling Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to the Preliminary Construction Schedule and Contractor's Construction Schedule, including, but not limited to, the following:
 - 1. Verify availability of qualified personnel needed to develop and update schedule.
 - 2. Discuss constraints, including phasing, work stages, area separations and interim milestones.
 - 3. Review delivery dates for Owner-furnished products.
 - 4. Review schedule for work of Owner's separate contracts.
 - 5. Review time required for review of submittals and re-submittals.
 - 6. Review requirements for tests and inspections by independent testing and inspecting agencies.
 - 7. Review time required for completion and startup procedures.
 - 8. Review and finalize list of construction activities to be included in schedule.
 - 9. Review submittal requirements and procedures.
 - 10. Review procedures for updating schedule.

1.5 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from parties involved.
 - 2. Coordinate each construction activity with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 SUBMITTALS SCHEDULE

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.

1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
2. Initial Submittal: Submit concurrently with preliminary bar-chart schedule. Include submittals required during the first 60 days of construction. List those required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - a. At Contractor's option, show submittals on the Preliminary Construction Schedule, instead of tabulating them separately.
3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for the Notice of Award to date of Final Completion.
 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
 2. Submittal Review Time: Include review and re-submittal times indicated in Division 1 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
 3. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Engineer's and Project Representative's administrative procedures necessary for certification of Substantial Completion.
- B. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
 1. Phasing: Arrange list of activities on schedule by phase.
 2. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
 3. Products Ordered in Advance: Include delivery date indicated in Division 1 Section 011100 "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
 4. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Uninterruptible services.
 - b. Partial use before Substantial Completion.
 - c. Seasonal variations.
 5. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
 - a. Subcontract awards.
 - b. Submittals.
 - c. Purchases.
 - d. Fabrication.
 - e. Sample testing.
 - f. Deliveries.

- g. Installation.
 - h. Tests and inspections.
 - i. Adjusting.
 - j. Curing.
 - k. Startup and placement into final use and operation.
 - l. List critical work and subcontracts here if requirement to indicate stages of the Work is limited only to those elements.
 - m. Substantial Completion.
- C. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.
- D. Cost Correlation: At the head of schedule, provide a cost correlation line, indicating planned and actual costs. On the line, show dollar volume of the Work performed as of dates used for preparation of payment requests.
- 1. Refer to Division 01 Section 012900 "Payment Procedures" for cost reporting and payment procedures.
- E. Contract Modifications: For each proposed contract modification and concurrent with its submission, demonstrate the effect of the proposed change on the overall project schedule.

2.3 PRELIMINARY CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Submit preliminary horizontal bar-chart-type construction schedule within seven days of date established for the Notice to Proceed.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first 60 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

2.4 SPECIAL REPORTS

- A. General: Submit special reports directly to Owner within one day of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, and response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 2. Include a report with updated schedule that indicates every change, including, but not limited to, durations, actual starts and finishes.
 3. As the Work progresses, indicate Actual Completion percentage for each item.
- B. Distribution: Distribute copies of approved schedule to Engineer, Project Representative, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
1. Post copies in Project meeting rooms and temporary field offices.
 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION-013200

SECTION 013300

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other miscellaneous submittals.

1.2 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.
- B. Section 012900 - Payment Procedures.
- C. Section 013100 - Project Management and Coordination.
- D. Section 013200 - Construction Progress Documentation.
- E. Section 014000 - Quality Requirements.
- F. Section 017700 - Closeout Procedures.
- G. Section 017839 - Project Record Documents

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Engineer's and Project Representative's responsive action.
- B. Informational Submittals: Written information that does not require Engineer's and Project Representative's approval. Submittals may be rejected for not complying with requirements.

1.4 SUBMITTAL PROCEDURES

- A. General: Electronic copies of CAD Drawings of the Contract Drawings can be provided by Engineer for Contractor's use in preparing submittals. The Engineer does not assume any responsibility for accuracy of CAD documents provided. Chazen requires the Contractor to sign an electronic file release form prior to distribution of any CAD documents.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Engineer and Project Representative reserve the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Submittals Schedule: Comply with requirements in Division 01 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.
- D. Processing Time: Allow enough time for submittal review, including time for re-submittals, as follows. Time for review shall commence on Engineer's receipt of submittal.
1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. Engineer will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Concurrent Review: Where concurrent review of submittals by Engineer's consultants, Owner, or other parties is required, allow 21 days for initial review of each submittal.
 3. Direct Transmittal to Consultant: Where the Contract Documents indicate that submittals may be transmitted directly to Engineer's consultants, provide duplicate copy of transmittal to Engineer and Project Representative. Submittal will be returned to Engineer before being returned to Contractor.
 4. If intermediate submittal is necessary, process it in same manner as initial submittal.
 5. Allow 15 days for processing each re-submittal.
 6. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing.
- E. Identification: Use the Engineer's standard transmittal cover sheet for each submittal. The Contractor will be provided an electronic copy of the standard transmittal cover sheet after project Award. A reference copy of the transmittal cover sheet has been included at the end of this section for reference. Submittals missing the Engineer's standard cover sheet or using a different cover sheet will be returned.
1. Complete cover sheet in its entirety.
 2. Include the following information on label for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name and address of Engineer.
 - d. Name and address of Contractor.
 - e. Name and address of subcontractor.
 - f. Name and address of supplier.
 - g. Name of manufacturer.
 - h. Unique identifier, including revision number.
 - i. Number and title of appropriate Specification Section.
 - j. Drawing number and detail references, as appropriate.

- k. Other necessary identification.
- F. Deviations: Highlight, encircle, or otherwise identify deviations from the Contract Documents on submittals.
- G. Additional Copies: Unless additional copies are required for final submittal, and unless Engineer or Project Representative observes noncompliance with provisions of the Contract Documents, initial submittal may serve as final submittal.
 - 1. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Engineer and Project Representative.
 - 2. Additional copies submitted for maintenance manuals will not be marked with action taken and will be returned.
- H. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using the Engineer's standard transmittal form which will be provided electronically to the Contractor following Award (a template of the standard transmittal is included for reference following this section). Engineer and Project Representative will return submittals, without review, received from sources other than Contractor.
 - 1. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Engineer and Project Representative on previous submittals, and deviations from requirements of the Contract Documents, including minor variations and limitations. Include the same label information as the related submittal.
- I. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, and installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- J. Use for Construction: Use only final submittals with mark indicating action taken by Engineer in connection with construction.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
 - 1. Number of Copies: Submit copies of each submittal, as follows, unless otherwise indicated:
 - a. Initial Submittal: Submit a preliminary single copy of each submittal where selection of options, color, pattern, texture, or similar characteristics is required. Engineer will return submittal with options selected.
 - b. Final Submittal: Submit three copies, unless copies are required for operation and maintenance manuals. Submit five copies where copies are required for operation

and maintenance manuals. Engineer will retain two copies; remainder will be returned. Mark up and retain one returned copy as a Project Record Document.

- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.
 - d. Standard color charts.
 - e. Manufacturer's catalog cuts.
 - f. Wiring diagrams showing factory-installed wiring.
 - g. Printed performance curves.
 - h. Operational range diagrams.
 - i. Mill reports.
 - j. Standard product operating and maintenance manuals.
 - k. Compliance with recognized trade association standards.
 - l. Compliance with recognized testing agency standards.
 - m. Application of testing agency labels and seals.
 - n. Notation of coordination requirements.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.
 - c. Fabrication and installation drawings.
 - d. Roughing-in and setting diagrams.
 - e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - f. Shopwork manufacturing instructions.
 - g. Templates and patterns.
 - h. Schedules.
 - i. Design calculations.
 - j. Compliance with specified standards.
 - k. Notation of coordination requirements.
 - l. Notation of dimensions established by field measurement.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 24 by 36 inches.
 3. Number of Copies: Submit copies of each submittal, as follows:
 - a. Initial Submittal: Submit two blue- or black-line prints. Engineer will return one print.

- b. Final Submittal: Submit three blue- or black-line prints, unless prints are required for operation and maintenance manuals. Submit five prints where prints are required for operation and maintenance manuals. Engineer will retain two prints; remainder will be returned. Mark up and retain one returned print as a Project Record Drawing.
- D. Coordination Drawings: Comply with requirements in Division 01 Section 013100 "Project Management and Coordination."
- E. Delegated-Design Submittal: Comply with requirements in Division 01 Section 014000 "Quality Requirements."
- F. Contractor's Construction Schedule: Comply with requirements in Division 01 Section 013200 "Construction Progress Documentation" for Project Representative's action.
- G. Submittals Schedule: Comply with requirements in Division 01 Section 013200 "Construction Progress Documentation."
- H. Application for Payment: Comply with requirements in Division 01 Section 012900 "Payment Procedures."
- I. Schedule of Values: Comply with requirements in Division 01 Section 012900 "Payment Procedures."
- J. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
 - 2. Number and title of related Specification Section(s) covered by subcontract.
 - 3. Drawing number and detail references, as appropriate, covered by subcontract.

2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
 - 1. Number of Copies: Submit two copies of each submittal, unless otherwise indicated. Engineer will not return copies.
 - 2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - 3. Test and Inspection Reports: Comply with requirements in Division 01 Section 014000 "Quality Requirements."
- B. Contractor's Construction Schedule: Comply with requirements in Division 01 Section 013200 "Construction Progress Documentation."

- C. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of Engineers and owners, and other information specified.
- D. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements.
- E. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
- F. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements and, where required, is authorized for this specific Project.
- G. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements. Include evidence of manufacturing experience where required.
- H. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements.
- I. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.
- J. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements.
- K. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- L. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements.
- M. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- N. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - 1. Name of evaluation organization.
 - 2. Date of evaluation.
 - 3. Time period when report is in effect.
 - 4. Product and manufacturers' names.

5. Description of product.
 6. Test procedures and results.
 7. Limitations of use.
- O. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements in Division 01 Section 017700 "Closeout Procedures."
- P. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- Q. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:
1. Preparation of substrates.
 2. Required substrate tolerances.
 3. Sequence of installation or erection.
 4. Required installation tolerances.
 5. Required adjustments.
 6. Recommendations for cleaning and protection.
- R. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
1. Name, address, and telephone number of factory-authorized service representative making report.
 2. Statement on condition of substrates and their acceptability for installation of product.
 3. Statement that products at Project site comply with requirements.
 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 6. Statement whether conditions, products, and installation will affect warranty.
 7. Other required items indicated in individual Specification Sections.
- S. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- T. Construction Photographs and Videotapes: Comply with requirements in Division 1 Section 013200 "Construction Progress Documentation."

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Engineer.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ENGINEER'S ACTION

- A. General: Engineer will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Engineer will review each submittal, make marks to indicate corrections or modifications required, and return it. Engineer will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
- C. Informational Submittals: Engineer will review each submittal and will not return it, or will reject and return it if it does not comply with requirements. Engineer will forward each submittal to appropriate party.
- D. Submittals not required by the Contract Documents will not be reviewed and may be discarded.

END OF SECTION-013300

SECTION 014000

QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-control services required by Engineer, Owner, Project Representative, or authorities having jurisdiction are not limited by provisions of this Section.

1.2 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.
- B. Section 013200 - Construction Progress Documentation.
- C. Section 017329 - Cutting and Patching.
- D. Divisions 02 through 48 Sections for specific test and inspection requirements.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.

- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction comply with requirements. Services do not include contract enforcement activities performed by Engineer or Project Representative.
- C. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

1.4 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1. Specification Section number and title.
 - 2. Description of test and inspection.
 - 3. Identification of applicable standards.
 - 4. Identification of test and inspection methods.
 - 5. Number of tests and inspections required.
 - 6. Time schedule or time span for tests and inspections.
 - 7. Entity responsible for performing tests and inspections.
 - 8. Requirements for obtaining samples.
 - 9. Unique characteristics of each quality-control service.
- C. Reports: Prepare and submit certified written reports that include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, and telephone number of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Ambient conditions at time of sample taking and testing and inspecting.
 - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - 12. Name and signature of laboratory inspector.
 - 13. Recommendations on retesting and re-inspecting.
- D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- B. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- C. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- D. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
- F. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - 1. Requirement for specialists shall not supersede building codes and similar regulations governing the Work, nor interfere with local trade-union jurisdictional settlements and similar conventions.
- G. Testing Agency Qualifications: An agency with the experience and capability to conduct testing and inspecting indicated, as documented by ASTM E 548, and that specializes in types of tests and inspections to be performed.
- H. Preconstruction Testing: Testing agency shall perform preconstruction testing for compliance with specified requirements for performance and test methods.
 - 1. Contractor responsibilities include the following:
 - a. Provide test specimens and assemblies representative of proposed materials and construction. Provide sizes and configurations of assemblies to adequately demonstrate capability of product to comply with performance requirements.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.

- c. Fabricate and install test assemblies using installers who will perform the same tasks for Project.
 - d. When testing is complete, remove assemblies; do not reuse materials on Project.
2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Engineer, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

1.6 QUALITY CONTROL

- A. Contractor Responsibilities: Unless otherwise indicated, provide quality-control services specified and required by authorities having jurisdiction.
1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- B. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing.
- C. Retesting/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that revised or replaced Work that failed to comply with requirements established by the Contract Documents.
- D. Testing Agency Responsibilities: Cooperate with Engineer and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Engineer and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 3. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 4. Do not release, revoke, alter, or increase requirements of the Contract Documents or approve or accept any portion of the Work.
 5. Do not perform any duties of Contractor.

- E. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
 - 1. Access to the Work.
 - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 - 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 - 4. Facilities for storage and field-curing of test samples.
 - 5. Delivery of samples to testing agencies.
 - 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 - 7. Security and protection for samples and for testing and inspecting equipment at Project site.

- F. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - 1. Provide materials and comply with installation requirements specified in other Sections of these Specifications. Restore patched areas and extend restoration into adjoining areas in a manner that eliminates evidence of patching.

- B. Protect construction exposed by or for quality-control service activities.

- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION-014000

SECTION 014200

REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": The term "approved," when used to convey Engineer's action on Contractor's submittals, applications, and requests, is limited to Engineer's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by Engineer, requested by Engineer, and similar phrases.
- D. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on Drawings or to other paragraphs or schedules in Specifications and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the user locate the reference.
- E. "Regulations": The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": The term "furnish" means to supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": The term "install" describes operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, and protecting, cleaning, and similar operations.
- H. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.
- I. "Installer": An installer is the Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

- J. The term "experienced," when used with an entity, means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
 - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- K. "Project site" is the space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
- C. Conflicting Requirements: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Engineer for a decision before proceeding.
 - 1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Engineer for a decision before proceeding.
- D. Copies of Standards: Each entity engaged in construction on Project must be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source and make them available on request.
- E. Abbreviations and Acronyms for Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

| | | |
|--------|--|----------------------------------|
| AA | Aluminum Association, Inc. (The) www.aluminum.org | (703) 358-2960 |
| AAMA | American Architectural Manufacturers Association www.aamanet.org | (847) 303-5664 |
| AAN | American Association of Nurserymen (See ANLA) | |
| AASHTO | American Association of State Highway and Transportation Officials www.aashto.org | (202) 624-5800 |
| ABMA | American Bearing Manufacturers Association www.americanbearings.org | (202) 367-1155 |
| ACI | American Concrete Institute/ACI International www.aci-int.org | (248) 848-3700 |
| ACPA | American Concrete Pipe Association www.concrete-pipe.org | (972) 506-7216 |
| AFPA | American Forest & Paper Association afandpa.org | (202) 463-2700 |
| AGA | American Gas Association www.aga.org | (202) 824-7000 |
| AI | Asphalt Institute www.asphaltinstitute.org | (606) 288-4960 |
| AIA | American Institute of Architects (The) www.aia.org | (800) AIA-3837 |
| AISC | American Institute of Steel Construction, Inc. www.aisc.org | (312) 670-2400 (800) 644-2400 |
| AISI | American Iron and Steel Institute www.steel.org | (202) 452-7100 (248) 945-4777 |
| AITC | American Institute of Timber Construction www.aitc-glulam.org/ | (303) 792-9559 |
| ALCA | National Association of Landscape Professionals (Formerly: ALCA - Associated Landscape Contractors of America) www.landscapeprofessionals.org | (800) 395-2522 (703) 736-9666 |
| ANLA | AmericanHort | (614) 487-1117 |

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|-------|---|----------------------------------|
| | (Formerly: ANLA - American Nursery & Landscape Association) (Formerly: AAN - American Association of Nurserymen) www.americahort.org | (202) 789-2900 |
| ANSI | American National Standards Institute www.ansi.org | (212) 642-4900 |
| AOSA | Association of Official Seed Analysts www.analyzeseeds.com | (202) 870-2412 |
| APA | Architectural Precast Association www.archprecast.org | (850) 205-5637 |
| ASCE | American Society of Civil Engineers www.asce.org | (800) 548-2723 (703) 295-6300 |
| ASSE | American Society of Sanitary Engineering www.asse-plumbing.org | (708) 995-3019 |
| ASTM | American Society for Testing and Materials www.astm.org | (610) 832-9585 |
| AWS | American Welding Society www.aws.org | (800) 443-9353 (305) 443-9353 |
| AWWA | American Water Works Association www.awwa.org | (800) 926-7337 (303) 794-7711 |
| CISPI | Cast Iron Soil Pipe Institute www.cispi.org | (224) 864-2910 |
| CLFMI | Chain Link Fence Manufacturers Institute www.chainlinkinfo.org | (301) 596-2583 |
| CPPA | Corrugated Polyethylene Pipe Association Division of Plastics Pipe Institute www.plasticpipe.org/drainage/cppa-about.php | (469) 499-1044 |
| CRSI | Concrete Reinforcing Steel Institute www.crsi.org | (847) 517-1200 |
| CSI | Construction Specifications Institute (The) www.csiresources.org/home | (800) 689-2900 (703) 684-0300 |
| GRI | Geosynthetic Research Institute www.geosynthetic-institute.org | (610) 522-8440 |
| HI | Hydraulic Institute www.pumps.org | (973) 267-9700 |

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|--------|---|----------------------------------|
| IAS | International Approval Services (See CSA International) | |
| ICRI | International Concrete Repair Institute www.icri.org | (651) 366-6095 |
| MSS | Manufacturers Standardization Society of The Valve and Fittings Industry, Inc. www.mss-hq.com | (703) 281-6613 |
| NCPI | National Clay Pipe Institute www.ncpi.org | (262) 742-2904 |
| NFPA | National Fire Protection Association www.nfpa.org | (800) 344-3555 (617) 770-3000 |
| NRMCA | National Ready Mixed Concrete Association www.nrmca.org | (301) 587-1400 |
| NSF | NSF International (National Sanitation Foundation International) www.nsf.org | (800) 673-6275 (734) 769-8010 |
| PCI | Precast/Pre-stressed Concrete Institute www.pci.org | (312) 786-0300 |
| STI | Steel Tank Institute www.steeltank.com | (847) 438-8265 |
| SWRI | Sealant, Waterproofing & Restoration Institute www.swrionline.org | (816) 472-7974 |
| UL | Underwriters Laboratories Inc. www.ul.com | (518) 213-0044 (631) 271-6200 |
| UNI | Uni-Bell PVC Pipe Association www.uni-bell.org | (972) 243-3902 |
| WASTEC | Waste Equipment Technology Association www.wastec.org | (800) 424-2869 (202) 244-4700 |

G. Abbreviations and Acronyms for Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

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|-----|-----------------------------|----------------|
| CFR | Code of Federal Regulations | (866) 272-6272 |
|-----|-----------------------------|----------------|

www.archives.gov/federal-register/cfr

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|---------|---|----------------|
| NYS DOT | New York State Department of Transportation www.dot.ny.us/index | (518) 457-3522 |
| NYS DEC | New York State Department of Environmental Conservation www.dec.ny.gov | (518) 408-5850 |
| NYS DOH | New York State Department of Health www.health.ny.gov | (866)-881-2809 |
| NCHRP | National Cooperative Highway Research Program www.tcb.org/NCHRP/NCHRP.aspx | (202)-334-1472 |
| NIST | National Institute of Standards and Technology www.nist.gov | (301) 975-2000 |
| OSHA | Occupational Safety & Health Administration (See CFR 29) www.osha.gov | (800) 321-6742 |
| TRB | Transportation Research Board www.nas.edu/trb | (202) 334-2934 |

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION-014200

SECTION 014529

TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDES

- A. Selection and payment.
- B. Contractor submittals.
- C. Laboratory responsibilities.
- D. Laboratory reports.
- E. Limits on testing laboratory authority.
- F. Contractor responsibilities.
- G. Schedule of inspections and tests.

1.2 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.
- B. Section 013300 – Submittal Procedures.
- C. Section 017700 – Closeout Procedures.
- D. Divisions 02 through 48 Sections for specific requirements and limitations applicable to testing and laboratory services individual parts of the work.

1.3 REFERENCES

- A. ANSI/ASTM D3740 – Practice for Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
- B. ANSI/ASTM E329 – Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction.

1.4 SELECTION AND PAYMENT

- A. Contractor shall employ and pay for services of an independent testing laboratory to perform specified inspection and testing.
- B. Employment of testing laboratory shall in no way relive Contractor of obligation to perform work in accordance with requirements of Contract Documents.

1.5 QUALITY ASSURANCE

- A. Comply with requirements of ANSI/ASTM E329 and ANSI/ASTM D3740.
- B. Laboratory: Authorized to operate in state in which Project is located.
- C. Laboratory Staff: Maintain a full time registered Engineer on staff.
- D. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy traceable to either National Bureau of Standards (NBS) Standards or accepted values of natural physical constants.

1.6 CONTRACTOR SUBMITTALS

- A. Prior to start of work, submit testing laboratory name, address, and telephone number, and names of full time registered Engineer and responsible officer.
- B. Submit copy of report of laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards (NBS) during most recent tour of inspection, with memorandum of remedies of any deficiencies reported by the inspection.

1.7 LABORATORY RESPONSIBILITIES

- A. Test samples of mixes submitted by Contractor.
- B. Provide qualified personnel at site. Cooperate with Engineer/Engineer and Contractor in performance of services.
- C. Perform specified inspection, sampling, and testing of Products in accordance with specified standards.
- D. Ascertain compliance of materials and mixes with requirements of Contract Documents.
- E. Promptly notify Engineer and Contractor of observed irregularities or non-conformance of Work or Products.
- F. Perform additional inspections and tests required by Engineer.

1.8 LABORATORY REPORTS

- A. After each inspection and test, promptly submit five copies of laboratory report to Engineer and to Contractor.
- B. Include:
 - 1. Date issued,
 - 2. Project title and number,
 - 3. Name of inspector,
 - 4. Date and time of sampling or inspection,
 - 5. Identification of product and Specifications Section,
 - 6. Location in the Project,
 - 7. Type of inspection or test,
 - 8. Date of test,
 - 9. Results of tests,
 - 10. Conformance with Contract Documents.
- C. When requested by Engineer, provide interpretation of test results.

1.9 LIMITS ON TESTING LABORATORY AUTHORITY

- A. Laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
- B. Laboratory may not approve or accept any portion of the Work.
- C. Laboratory may not assume any duties of Contractor.
- D. Laboratory has no authority to stop the Work.

1.10 CONTRACTOR RESPONSIBILITIES

- A. Deliver to laboratory at designated location, adequate samples of materials proposed to be used which require testing, along with proposed mix designs.
- B. Cooperate with laboratory personnel, and provide access to the Work (and to manufacturer's facilities).
- C. Provide incidental labor and facilities to provide access to Work to be tested, to obtain and handle samples at the site or at source of products to be tested, to facilitate tests and inspections, storage and curing of test samples.
- D. Notify Engineer and laboratory 24 hours prior to expected time for operations requiring inspection and testing services.
- E. Arrange with laboratory and pay for additional samples and tests required by Contractor beyond specified requirements.

1.11 SCHEDULE OF INSPECTIONS AND TESTS

- A. Reference Section 014100 and Contract Drawings

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION-014529

SECTION 015000

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. This Section includes requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection facilities.
- B. Temporary utilities include, but are not limited to, the following:
 - 1. Sanitary facilities, including toilets, wash facilities, and drinking-water facilities.
- C. Support facilities include, but are not limited to, the following:
 - 1. Temporary roads and paving.
 - 2. Dewatering facilities and drains.
 - 3. Project identification and temporary signs.
 - 4. Waste disposal facilities.
 - 5. Storage and fabrication sheds.
 - 6. Lifts and hoists.
 - 7. Construction aids and miscellaneous services and facilities.
- D. Security and protection facilities include, but are not limited to, the following:
 - 1. Environmental protection.
 - 2. Stormwater control.
 - 3. Tree and plant protection.
 - 4. Site enclosure fence.
 - 5. Security enclosure and lockup.
 - 6. Barricades, warning signs, and lights.
 - 7. Fire protection.

1.2 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.
- B. Section 013300 - Submittal Procedures.
- C. Section 017000 - Execution Requirements.

1.3 SUBMITTALS

- A. Temporary Utility Reports: Submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.
- B. Implementation and Termination Schedule: Within 15 days of date established for submittal of Contractor's Construction Schedule, submit a schedule indicating implementation and termination of each temporary utility.

1.4 QUALITY ASSURANCE

- A. Standards: Comply with ANSI A10.6, NECA's "Temporary Electrical Facilities," and NFPA 241.
 - 1. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.5 PROJECT CONDITIONS

- A. Conditions of Use: The following conditions apply to use of temporary services and facilities by all parties engaged in the Work:
 - 1. Keep temporary services and facilities clean and neat.
 - 2. Relocate temporary services and facilities as required by progress of the Work.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide new materials. Undamaged, previously used materials in serviceable condition may be used if approved by Engineer. Provide materials suitable for use intended.
- B. Water: Potable.

2.2 EQUIPMENT

- A. General: Provide equipment suitable for use intended.
- B. Fire Extinguishers: Hand carried, portable, UL rated. Provide class and extinguishing agent as indicated or a combination of extinguishers of NFPA-recommended classes for exposures.
 - 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

- C. Self-Contained Toilet Units: Single-occupant units of chemical, aerated recirculation, or combustion type; vented; fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- D. Drinking-Water Fixtures: Containerized, tap-dispenser, bottled-water drinking-water units, including paper cup supply.
- E. Electrical Outlets: Properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-V plugs into higher-voltage outlets; equipped with ground-fault circuit interrupters, reset button, and pilot light.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Engage appropriate local utility company to install temporary service or connect to existing service. Where utility company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with utility company recommendations.
 - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
 - 2. Provide adequate capacity at each stage of construction. Before temporary utility is available, provide trucked-in services.
 - 3. Obtain easements to bring temporary utilities to Project site where Owner's easements cannot be used for that purpose.
- B. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities.
 - 1. Disposable Supplies: Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Maintain adequate supply. Provide covered waste containers for disposal of used material.
 - 2. Toilets: Install self-contained toilet units. Shield toilets to ensure privacy.

3. Wash Facilities: Install wash facilities supplied with potable water at convenient locations for personnel who handle materials that require wash up. Dispose of drainage properly. Supply cleaning compounds appropriate for each type of material handled.
 - a. Provide safety showers, eyewash fountains, and similar facilities for convenience, safety, and sanitation of personnel.
4. Drinking-Water Facilities: Provide bottled-water, drinking-water units.

3.3 SUPPORT FACILITIES INSTALLATION

A. General: Comply with the following:

1. Locate field offices, storage sheds, sanitary facilities, and other temporary construction and support facilities for easy access.
2. Provide incombustible construction for offices, shops, and sheds located within construction area or within 30 feet of building lines. Comply with NFPA 241.
3. Maintain support facilities until Substantial Completion

B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate to support loads and to withstand exposure to traffic during construction period. Locate temporary roads and paved areas within construction limits indicated on Drawings.

1. Provide a reasonably level, graded, well-drained sub-grade of satisfactory soil material, compacted to not less than 95 percent of maximum dry density in the top 6 inches.
2. Provide gravel paving course of sub-base material not less than 3 inches thick; roller compacted to a level, smooth, dense surface.
3. Provide dust-control treatment that is nonpolluting and non-tracking. Reapply treatment as required to minimize dust.

C. Traffic Controls: Provide temporary traffic controls at junction of temporary roads with public roads. Include warning signs for public traffic and "STOP" signs for entrance onto public roads. Comply with requirements of authorities having jurisdiction.

D. Dewatering Facilities and Drains: Comply with requirements in applicable Division 2 Sections for temporary drainage and dewatering facilities and operations not directly associated with construction activities included in individual Sections. Where feasible, use same facilities. Maintain Project site, excavations, and construction free of water.

1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining property nor endanger permanent Work or temporary facilities.
2. Before connection and operation of permanent drainage piping system, provide temporary drainage.
3. Remove snow and ice as required to minimize accumulations.

E. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Containerize and clearly label hazardous, dangerous, or unsanitary waste materials separately from other waste. Comply with Division 1 Section "Execution Requirements" for progress cleaning requirements.

1. If required by authorities having jurisdiction, provide separate containers, clearly labeled, for each type of waste material to be deposited.
 2. Develop a waste management plan for Work performed on Project. Indicate types of waste materials Project will produce and estimate quantities of each type. Provide detailed information for on-site waste storage and separation of recyclable materials. Provide information on destination of each type of waste material and means to be used to dispose of all waste materials.
- F. Janitorial Services: Provide janitorial services on a daily basis for temporary offices, first-aid stations, toilets, wash facilities, lunchrooms, and similar areas.
- G. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment involved, including temporary utility services. Sheds may be open shelters or fully enclosed spaces within building or elsewhere on-site.
1. Construct framing, sheathing, and siding using fire-retardant-treated lumber and plywood.
 2. Paint exposed lumber and plywood with exterior-grade acrylic-latex emulsion over exterior primer.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects. Avoid using tools and equipment that produce harmful noise. Restrict use of noisemaking tools and equipment to hours that will minimize complaints from persons or firms near Project site.
- B. Stormwater Control: Provide earthen embankments and similar barriers in and around excavations and sub-grade construction, sufficient to prevent flooding by runoff of stormwater from heavy rains.
- C. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erecting structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and public of possible hazard. Where appropriate and needed, provide lighting, including flashing red or amber lights.
1. For safety barriers, sidewalk bridges, and similar uses, provide minimum 5/8-inch- thick exterior plywood.
- D. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
1. Provide fire extinguishers, installed on walls on mounting brackets, visible and accessible from space being served, with sign mounted above.
 - a. Field Offices: Class A stored-pressure water-type extinguishers.

- b. Other Locations: Class ABC dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for exposures.
 - c. Locate fire extinguishers where convenient and effective for their intended purpose.
2. Store combustible materials in containers in fire-safe locations.
 3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for firefighting. Prohibit smoking in hazardous fire-exposure areas.
 4. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition.
 5. Develop and supervise an overall fire-prevention and first-aid fire-protection program for personnel at Project site. Instruct personnel in methods and procedures. Post warnings and information.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage caused by freezing temperatures and similar elements.
- C. Termination and Removal: Remove each temporary facility when need for its service has ended, or no later than Substantial Completion.
 1. Materials and facilities that constitute temporary facilities are the property of Contractor.
 2. Remove temporary paving not intended for or acceptable for integration into permanent paving. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
 3. At Substantial Completion, clean and renovate site used during construction period. Comply with final cleaning requirements in Division 01 Section 017700 "Closeout Procedures."

END OF SECTION-015000

SECTION 015526

TRAFFIC CONTROL

PART 1 GENERAL

1.1 DESCRIPTION

- A. The Work of this Section consists of maintaining traffic and protecting the public from damage to persons and property within the limits of and for the duration of this contract.
- B. Maintain traffic over a reasonably smooth traveled way marked by signs, delineators, guiding devices and other acceptable methods in conformance with the National Manual on Uniform Traffic Control Devices for Streets and Highways 2009 Edition (National MUTCD) and the New York State Supplement to the National Manual on Uniform Traffic Control Devices for Streets and Highways – 2010 Edition (NYS Supplement) available at: <https://www.nysdot.gov/divisions/operating/oom/transportation-systems/traffic-operations-section/mutcd>

1.2 APPLICABILITY

- A. The Work of this Section shall be required in all areas within the project limits that will be open to public vehicular traffic.

1.3 RESPONSIBILITY

- A. Assume responsibility for conducting operations in a manner to insure the safety and convenience of all travelers and adjoining property owners within the limits of and for the duration of the contract.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Comply with the requirements of DOT Section 700 Materials as they apply to the various materials required for the Work of this Section.
- B. Provide sign panels of aluminum, galvanized steel or plywood with faces of reflective sheet material and non-reflective black characters conforming to DOT Section 730-13.
- C. Provide delineators, barricades and lighting for construction barricades in accordance with the requirements of National MUTCD and NYS Supplement. Where reflective materials are required, conform to DOT Section 730-05.02 except where glass or plastic buttons are used as delineators. Barricades, cones and drums may use reflective materials conforming to DOT Section 730-05.01.

PART 3 EXECUTION

3.1 GENERAL

- A. Remove construction equipment and materials from roadway during non-working hours or provide protection in such a manner that they will not constitute a traffic hazard.
- B. Conduct and schedule the Work in a manner that will minimize the time during which the traveling public will be exposed to hazards.
- C. Do not park employees personal vehicles within the work area in a manner that they will constitute a traffic hazard.
- D. Keep traveled way reasonably smooth and hard at all times.
- E. Keep the traveled way of all public highways utilized for hauling materials to or from this project free of foreign objects that may fall or drop from transporting vehicles.
- F. Correct dusty conditions resulting from the Work by the use of calcium chloride and/or water. Distribute water uniformly by the use of suitable spray heads or spray bar. The Director's Representative will be the sole judge of the need for the application of water for dust control. Apply water at the intervals and locations ordered by the Director's Representative.
- G. Whenever it becomes necessary to maintain traffic on one lane, provide adequate traffic controls on the section of roadway on which vehicle traffic is maintained. Provide competent flag persons or traffic signals at the location which will in the judgment of the Director's Representative adequately and continuously control one lane traffic.
- H. Provide a sufficient number of competent flag persons in areas where construction operations are in potential conflict with public vehicular traffic. Flag person shall wear orange hats or caps and vests in conformance with National MUTCD and NYS Supplement.
- I. Maintain safe and adequate ingress and egress to and from intersecting highways, sidewalks and driveways.
- J. The Contractor is not responsible for removal of snow and ice from pavements or traveled ways open to public vehicular traffic.
- K. Maintain existing and new drainage structures, culverts and ditches to adequately drain the traveled way.
- L. Provide, maintain, move and remove delineation and guiding devices to properly delineate a safe and reasonable roadway. Delineate areas on which it is unsafe to travel.
- M. Limit and delineate drop-offs to less than 6 inches by providing approved delineators at intervals of not more than 200 feet.

3.2 CONSTRUCTION SIGNS

- A. Provide, maintain, move and remove reflectorized construction signs in accordance with the requirements of National MUTCD and NYS Supplement.
- B. Paint supports and backs of sign panels with two coats of white paint.
- C. Mount construction signs a minimum of 5 feet above the surface of the traveled way.

3.3 CONSTRUCTION BARRICADES

- A. Provide, maintain, move and remove lighted construction barricades in accordance with the requirements of National MUTCD and NYS Supplement
- B. Provide flashing barricade lights of Type A, low intensity conforming to the requirements of National MUTCD and NYS Supplement
- C. Hours of operation for barricade lights shall be from dusk to dawn.

3.4 PAVEMENT DELINEATION

- A. Provide pavement delineation in accordance with National MUTCD and NYS Supplement on each course of asphalt concrete upon which traffic will be maintained.

3.5 OPENING ROADWAY TO TRAFFIC PRIOR TO CONTRACT ACCEPTANCE

- A. Maintain and protect traffic on any portion of pavement or structure ordered in writing by the Director or as shown on the drawings to be opened to traffic prior to contract acceptance.

3.6 REMOVAL OF TRAFFIC CONTROL DEVICES

- A. Promptly remove all delineators, signs, barricades and pavement workings when in the opinion of the Director's Representative their presence constitutes a hazard or inconvenience to the traveling public.
- B. Remove all remaining traffic control devices upon completion of the Work of this contract unless otherwise ordered in writing by the Director's Representative.

END OF SECTION 015526

SECTION 016000

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDES

- A. This Section includes the following administrative and procedural requirements: selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.

1.2 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
- B. Section 014200 - References.
- C. Section 017700 - Closeout Procedures.

1.3 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation, shown or listed in manufacturer's published product literature, which is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

- C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.
- D. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
- E. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.

1.4 SUBMITTALS

- A. Product List: Submit a list, in tabular form, showing specified products. Include generic names of products required. Include manufacturer's name and proprietary product names for each product.
 - 1. Coordinate product list with Contractor's Construction Schedule and the Submittals Schedule.
 - 2. Form: Tabulate information for each product under the following column headings:
 - a. Specification Section number and title.
 - b. Generic name used in the Contract Documents.
 - c. Proprietary name, model number, and similar designations.
 - d. Manufacturer's name and address.
 - e. Supplier's name and address.
 - f. Installer's name and address.
 - g. Projected delivery date or time span of delivery period.
 - h. Identification of items that require early submittal approval for scheduled delivery date.
 - 3. Initial Submittal: Within 30 days after date of commencement of the Work, submit 3 copies of initial product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 - a. At Contractor's option, initial submittal may be limited to product selections and designations that must be established early in Contract period.
 - 4. Completed List: Within 60 days after date of commencement of the Work, submit 3 copies of completed product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 - 5. Engineer's Action: Engineer will respond in writing to Contractor within 15 days of receipt of completed product list. Engineer's response will include a list of unacceptable product selections and a brief explanation of reasons for this action. Engineer's response, or lack

of response, does not constitute a waiver of requirement that products comply with the Contract Documents.

- B. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
1. Substitution Request Form: Use CSI Form 13.1A.
 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified material or product cannot be provided.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, which will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. List of similar installations for completed projects with project names and addresses and names and addresses of Engineers and owners.
 - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
 - i. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
 - j. Cost information, including a proposal of change, if any, in the Contract Sum.
 - k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
 - l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
 3. Engineer's Action: If necessary, Engineer will request additional information or documentation for evaluation within one week of receipt of a request for substitution. Engineer will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
 - a. Form of Acceptance: Change Order.

- b. Use product specified if Engineer cannot make a decision on use of a proposed substitution within time allocated.
- C. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 1 Section "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
 - 5. Store products to allow for inspection and measurement of quantity or counting of units.
 - 6. Store materials in a manner that will not endanger Project structure.
 - 7. Store products that are subject to damage by the elements, under cover in a weather tight enclosure above ground, with ventilation adequate to prevent condensation.
 - 8. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
 - 9. Protect stored products from damage.
- B. Storage: Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
 - 1. Refer to Divisions 2 through 16 Sections for specific content requirements and particular requirements for submitting special warranties.

- C. Submittal Time: Comply with requirements in Division 1 Section 017770 "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT OPTIONS

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged, and unless otherwise indicated, that are new at time of installation.
 - 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 - 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 - 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 - 4. Where products are accompanied by the term "as selected," Engineer will make selection.
 - 5. Where products are accompanied by the term "match sample," sample to be matched is Engineer's.
 - 6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.
 - 7. Or Equal: Where products are specified by name and accompanied by the term "or equal" or "or approved equal" or "or approved," comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.

- B. Product Selection Procedures: Procedures for product selection include the following:
 - 1. Product: Where Specification paragraphs or subparagraphs titled "Product" name a single product and manufacturer, provide the product named.
 - a. Substitutions may be considered.
 - 2. Manufacturer/Source: Where Specification paragraphs or subparagraphs titled "Manufacturer" or "Source" name single manufacturers or sources, provide a product by the manufacturer or from the source named that complies with requirements.
 - a. Substitutions may be considered.
 - 3. Products: Where Specification paragraphs or subparagraphs titled "Products" introduce a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
 - a. Substitutions may be considered.

4. Manufacturers: Where Specification paragraphs or subparagraphs titled "Manufacturers" introduce a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
 - a. Substitutions may be considered.
5. Available Products: Where Specification paragraphs or subparagraphs titled "Available Products" introduce a list of names of both products and manufacturers, provide one of the products listed or another product that complies with requirements. Comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.
6. Available Manufacturers: Where Specification paragraphs or subparagraphs titled "Available Manufacturers" introduce a list of manufacturers' names, provide a product by one of the manufacturers listed or another manufacturer that complies with requirements. Comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.
7. Product Options: Where Specification paragraphs titled "Product Options" indicate that size, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide either the specific product or system indicated or a comparable product or system by another manufacturer. Comply with provisions in "Product Substitutions" Article.
8. Basis-of-Design Products: Where Specification paragraphs or subparagraphs titled "Basis-of-Design Products" are included and also introduce or refer to a list of manufacturers' names, provide either the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.
 - a. Substitutions may be considered.
9. Visual Matching Specification: Where Specifications require matching an established Sample, select a product (and manufacturer) that complies with requirements and matches Engineer's sample. Engineer's decision will be final on whether a proposed product matches satisfactorily.
 - a. If no product available within specified category matches satisfactorily and complies with other specified requirements, comply with provisions of the Contract Documents on "substitutions" for selection of a matching product.
10. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, and textures" or a similar phrase, select a product (and manufacturer) that complies with other specified requirements.
 - a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Engineer will select color, pattern, or texture from manufacturer's product line that does not include premium items.
 - b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Engineer will select color, pattern, or texture from manufacturer's product line that includes both standard and premium items.

2.2 PRODUCT SUBSTITUTIONS

- A. Timing: Engineer will consider requests for substitution if received within 60 days after the Notice of Award. Requests received after that time may be considered or rejected at discretion of Engineer.

- B. Conditions: Engineer will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Engineer will return requests without action, except to record noncompliance with these requirements:
 - 1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Engineer for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 - 2. Requested substitution does not require extensive revisions to the Contract Documents.
 - 3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - 4. Substitution request is fully documented and properly submitted.
 - 5. Requested substitution will not adversely affect Contractor's Construction Schedule.
 - 6. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - 7. Requested substitution is compatible with other portions of the Work.
 - 8. Requested substitution has been coordinated with other portions of the Work.
 - 9. Requested substitution provides specified warranty.
 - 10. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

2.3 COMPARABLE PRODUCTS

- A. Where products or manufacturers are specified by name, submit the following, in addition to other required submittals, to obtain approval of an unnamed product:
 - 1. Evidence that the proposed product does not require extensive revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 - 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 - 3. Evidence that proposed product provides specified warranty.
 - 4. List of similar installations for completed projects with project names and addresses and names and addresses of Engineers and owners, if requested.
 - 5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION-016000

SECTION 017000

EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering and surveying.
 - 3. General installation of products.
 - 4. Coordination of Owner-installed products.
 - 5. Progress cleaning.
 - 6. Starting and adjusting.
 - 7. Protection of installed construction.
 - 8. Correction of the Work.

1.2 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.
- B. Section 013100 - Project Management and Coordination.
- C. Section 013300 - Submittal Procedures.
- D. Section 017329 - Cutting and Patching.
- E. Section 017700 - Closeout Procedures.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and

verify the existence and location of mechanical and electrical systems and other construction affecting the Work.

1. Before construction, verify the location and points of connection of utility services.

B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.

1. Before construction, verify the location and invert elevation at points of connection or work in proximity of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.
 - c. List of unacceptable installation tolerances.
 - d. Recommended corrections.
2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
3. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Existing Utility Information: Furnish information to local utility and Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.

B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:

1. Notify Engineer, Project Representative and Owner not less than two days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Owner's written permission.

- C. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- D. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- E. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Engineer. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents. Submit requests on CSI Form 13.2A, "Request for Interpretation."

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Engineer and Project Representative promptly.
- B. General: Lay out the Work using accepted surveying practices.
 - 1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
 - 2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 - 3. Inform installers of lines and levels to which they must comply.
 - 4. Check the location, level and plumb, of every major element as the Work progresses.
 - 5. Notify Engineer and Project Representative when deviations from required lines and levels exceed allowable tolerances.
 - 6. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.
- D. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Engineer and Project Representative.

3.4 FIELD ENGINEERING

- A. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
 - 1. Do not change or relocate existing benchmarks or control points without prior written approval of Engineer. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Engineer and Project Representative before proceeding.
 - 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.

- B. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
 - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
 - 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
 - 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of use.

- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

- F. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 - 1. Allow for movement, including thermal expansion and contraction.

- G. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- H. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.6 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Cutting and Patching: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.
 - 1. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.
- H. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.

- I. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- J. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- K. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.7 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 1 Section 014000 "Quality Requirements."

3.8 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.9 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 01 Section 017329 "Cutting and Patching."
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.

- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION-017000

SECTION 017123

FIELD ENGINEERING

PART 1 - GENERAL

1.1 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.
- B. Section 017700 – Closeout Procedures.

1.2 QUALITY ASSURANCE

- A. Employ an independent Land Surveyor, licensed to practice in the State of New York, for the duration of the Work, to certify the accuracy of the survey work.
 - 1. The word "independent" as used above means a person not in the regular employment of the Contractor or having any vested interest in the Contractor's business.

1.3 SUBMITTALS

- A. Submit the name, address, telephone number, and registration number of the Land Surveyor before starting the survey work.
- B. On request, submit documentation verifying accuracy of survey work.
- C. Upon completion of the Work, submit a certificate signed and sealed by the Land Surveyor, stating that the elevations and locations of the Work are in conformance with the Contract Documents.

1.4 PROJECT RECORD DOCUMENTS

- A. Maintain a complete and accurate log of control and survey work as it progresses.
- B. Record location data for control points in sketch form and turn over 6 copies of sketches and computations to the Engineer.

- C. Submit Project Record Documents under provisions of Section 017839.

1.5 TOOLS, EQUIPMENT, AND MATERIALS

- A. Furnish all tools, equipment, and materials required to perform the work of this Section.
- B. Permanent Survey Markers: Conform to NYSDOT Standards Specifications Section 625-1.04, Permanent Survey Markers.

1.6 EXAMINATION

- A. Verify locations of control points prior to starting work.
- B. Promptly notify Engineer of any discrepancies discovered.

1.7 CONTROL POINTS

- A. Control datum for survey is indicated on the Drawings.
- B. Protect control points prior to starting site work; preserve control points during construction.
- C. Promptly report to Engineer the loss or destruction of any control point or relocation required because of changes in grades or other reasons.
- D. Replace dislocated control points based on original survey control. Make no changes without prior written notice to the Engineer.

1.8 ESTABLISHING CONTROL POINTS

- A. Prior to clearing or earthwork operations, install permanent survey markers at the coordinate locations shown on the drawings. Establish and record the exact coordinates of these markers to within one one-hundredth of a foot horizontally.
- B. Reference coordinates and elevations to the horizontal and vertical datum provided for this contract.
- C. Locate each permanent survey marker from at least 3 points of permanent reference.

1.9 SURVEY REQUIREMENTS

- A. Utilize recognized engineering survey practices.
- B. Establish a minimum of two permanent survey markers to be used as bench marks for vertical control on the Site where indicated on the Drawings and referenced to established control points. Record locations, with horizontal and vertical data to within one one-hundredth of a foot, on Project Record Documents.
- C. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
 - 1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
 - 2. Grid or axis for structures.
 - 3. Building foundation, column locations, ground floor elevations.
- D. Verify disturbed layouts by same means.

1.10 FIELD ENGINEERING FOR DRAINAGE STRUCTURES, PIPES, CULVERTS, AND TUNNELS

- A. Drainage Structures: Provide stakes marked with inverts. Also mark structure number if indicated on Drawings.
- B. Pipes, Culverts, and Tunnels: Provide stakes at each end marked with inverts.

1.11 FIELD ENGINEERING FOR CHANNELS AND ROADWAY STRUCTURES

- A. Channels: Provide stakes at centerline of channel at each side of roadway structure.
- B. Roadway Structures: Stake centerline of structural bearing points, footings, anchor bolts, and other features.

1.12 FIELD ENGINEERING FOR ROADWAYS AND PAVING WORK

- A. Place two offset stakes at each centerline station (50 foot intervals) and at tangent points, radius points, abrupt changes in grade, super-elevation, and other locations necessary to maintain layout and grade control.

- B. Mark each stake with the correct centerline station number, description, offset and cut or fill.
- C. Restore faded or illegible markings.
- D. Provide pins and hubs directly adjacent to the Work at a spacing of 25 feet. Mark pins and affix string lines to provide adequate horizontal and vertical control for paving work.
- E. Immediately following placement of the final paving course and prior to project closeout, re-establish and mark the location of all centerline stations with masonry nails at least 2 inches long. Drive nail heads flush with the pavement surface.
- F. For points of curve and tangent points provide identifying markings at the outside edge of each lane.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION-017123

SECTION 017329

CUTTING AND PATCHING

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. This Section includes procedural requirements for cutting and patching.

1.2 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.
- B. Section 024119 - Selective Demolition.
- C. Divisions 02 through 50 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the work.

1.3 DEFINITIONS

- A. Cutting: Removal of existing construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.4 SUBMITTALS

- A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
 - 1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
 - 2. Changes to Existing Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in appearance and other significant visual elements.
 - 3. Products: List products to be used and firms or entities that will perform the Work.
 - 4. Dates: Indicate when cutting and patching will be performed.

5. Utilities: List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out of service. Indicate how long service will be disrupted.
6. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.
7. Engineer's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

1.5 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
- C. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching.

1.6 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections of these Specifications.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.

1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Existing Services: Where existing services are required to be removed, relocated, or abandoned, bypass such services before cutting to avoid interruption of services.

3.3 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 1. Cut existing construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 2. Existing Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 3. Concrete or Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 4. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.
 5. Proceed with patching after construction operations requiring cutting are complete.

- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.
1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

END OF SECTION-017329

SECTION 017700

CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Project Record Documents.
 - 3. Warranties.
 - 4. Final cleaning.

1.2 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.
- B. Section 012900 - Payment Procedures.
- C. Section 013200 - Construction Progress Documentation.
- D. Section 017000 - Execution Requirements.
- E. Section 017839 - Project Record Documents.
- F. Divisions 02 through 50 Sections for specific closeout and special cleaning requirements for products of those Sections.

1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. Advise Owner of pending insurance changeover requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 5. Prepare and submit Project Record Documents, Final Completion construction photographs and photographic negatives, damage or settlement surveys, and similar final record information.
 - 6. Terminate and remove temporary facilities from Project site, along with construction tools, and similar elements.

7. Submit changeover information related to Owner's use, operation, and maintenance.
8. Complete final cleaning requirements.
9. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Engineer, that must be completed or corrected before certificate will be issued.

1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

1.4 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:

1. Submit a final Application for Payment according to Division 1 Section 012900 "Payment Procedures."
2. Submit certified copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Engineer. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction. Use CSI Form 14.1A.

1. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Engineer and Project Representative.
 - d. Name of Contractor.
 - e. Page number.

1.6 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Engineer for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 - 1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.

- e. Remove debris and surface dust from limited access spaces, including trenches, vaults, manholes, and similar spaces.
 - f. Remove labels that are not permanent.
 - g. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
- B. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION-017700

SECTION 017839

PROJECT RECORD DOCUMENTATION

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.

1.2 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.
- B. Section 017700 - Closeout Procedures.

1.3 SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Hard Copies: Submit one set of marked-up Record Prints.
 - 2. Digital Copies: Submit one site of digital copies in AutoCAD format and one set of digital copies in pdf format.
- B. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit one copy of each Product Data submittal.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of blue- or black-line white prints of the Contract Drawings and Shop Drawings.
1. Preparation: Mark Record Prints to show the actual installation of all contract items. Contractor is required to prepare the record drawings.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Information submitted shall be recorded in an understandable fashion.
 2. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Locations and depths of underground utilities.
 - d. Actual equipment locations.
 - e. Changes made by Change Order or Construction Change Directive.
 - f. Changes made following Engineer's written orders.
 - g. Details not on the original Contract Drawings.
 - h. Field records for variable and concealed conditions.
 3. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
 4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
 5. Contractor is required to submit on 8 ½" x 11" sheets at end of project all pertinent location information i.e., tie sketches to individual water services (3 ties each min.), valve clusters w/tie information, etc.
- B. Newly Prepared Record Drawings:
1. New Drawings may be required when a Change Order is issued.
 2. Consult with Engineer for proper scale and scope of detailing and notations required to record the actual physical installation and its relation to other construction. Integrate newly prepared Record Drawings into Record Drawing sets; comply with procedures for formatting, organizing, copying, binding, and submitting.
- C. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize Record Prints and newly prepared Record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 2. Identification: As follows:
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS."
 - d. Name of Engineer and Project Representative.

- e. Name of Contractor.

2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
 - 1. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 - 2. Record the name of the manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 - 3. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.

2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - 1. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.

2.4 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes.
- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss.

END OF SECTION-017839

SECTION 024113

SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. This Section includes the following:
 - 1. Demolition and removal of selected site elements.
 - 2. Repair procedures for selective demolition operations.

1.2 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.
- B. Section 01 10 00 - Summary.
- C. Section 01 14 00 - Work Restrictions.
- D. Section 01 50 00 - Temporary Construction Facilities and Controls.
- E. Section 02 41 16 – Structure Demolition

1.3 DEFINITIONS

- A. Remove: Existing items from site and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled. Removal shall be completed daily.
- B. Existing to Remain: Existing items that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP

- A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, demolished materials shall become Contractor's property and shall be removed from Project site.

1.5 SUBMITTALS

- A. Proposed Dust-Control and Noise-Control Measures: Submit statement or drawing that indicates the measures proposed for use, proposed locations, and proposed time frame for their operation. Identify options if proposed measures are later determined to be inadequate.

- B. Schedule of Selective Demolition Activities: Indicate the following:
 - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.
 - 2. Interruption of utility services.
 - 3. Coordination for shutoff, capping, and continuation of utility services.
- C. Inventory: After selective demolition is complete, submit a list of items that have been removed and salvaged for reuse/delivery to owner with indication of which.
- D. Pre-demolition Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, which might be misconstrued as damage caused by selective demolition operations. Submit before Work begins.
- E. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.6 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI A10.6 and NFPA 241.
- C. Pre-demolition Conference: Conduct conference at Project site to comply with requirements in Section "Project Management and Coordination."

1.7 PROJECT CONDITIONS

- A. Maintain access to existing walkways, roads, and other adjacent occupied or used facilities.
 - 1. Do not close or obstruct walkways, roads, or other occupied or used facilities without written permission from owner and authorities having jurisdiction.
- B. Owner assumes no responsibility for condition of areas to be selectively demolished.
 - 1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Hazardous Materials: Hazardous Material Survey was completed and determined material present in shed to be demolished. See appendix for survey.
 - 1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Director's Representative and Owner.
- D. Storage or sale of removed items or materials on-site will not be permitted.
- E. Utility Service: Maintain existing utilities in service and protect them against damage during selective demolition operations.

1.8 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 REPAIR MATERIALS

- A. Comply with material and installation requirements specified in individual Specification Sections.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- B. When unanticipated conflicts with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Engineer.
- C. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES

- A. Existing Utilities: Maintain services and protect them against damage during selective demolition operations.
- B. Do not interrupt existing utilities or operating facilities unless authorized in writing by Owner and authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and to authorities having jurisdiction.
 - 1. Provide at least 72 hours notice to Owner if shutdown of service is required during changeover.
- C. Utility Requirements: Locate and identify utilities in or adjacent to structures to be selectively demolished.
 - 1. Arrange to shut off indicated utilities with utility companies.
 - 2. If utility services are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary utilities that bypass area of selective demolition and that maintain continuity of service.

3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities. Contractor shall maintain continuous access to site at all times. Work will need to be staged so that patron access is prioritized at all times. Coordinate potential disturbances with owner & owner's representative prior to execution.
 - 1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
 - 2. Erect temporary protection, such as walks, fences, and railings where required by authorities having jurisdiction.
 - 3. Protect existing site improvements, appurtenances, and landscaping to remain.
 - 4. Erect a plainly visible fence around drip line of individual trees or around perimeter drip line of groups of trees to remain.
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 1. Provide protection to ensure safe passage of people around selective demolition area.
- C. Temporary Shoring: Provide and maintain shoring, bracing, or structural support to preserve stability and prevent movement, settlement, or collapse of construction to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
 - 1. Strengthen or add new supports when required during progress of selective demolition.

3.4 POLLUTION CONTROLS

- A. Dust Control: Use water mist, temporary enclosures, and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations.
 - 1. Do not use water when it may damage existing construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.
- B. Disposal: Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- C. Cleaning: Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations daily. Return adjacent areas to condition existing before selective demolition operations began.

3.5 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
 2. Maintain adequate ventilation when using cutting torches.
 3. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 4. Dispose of demolished items and materials promptly.
 5. Return elements of construction and surfaces that are to remain to condition existing before selective demolition operations began.
- B. Existing Items to Remain: Protect construction indicated to remain against damage during selective demolition.
- C. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals, using power-driven saw, then remove concrete between saw cuts.
- D. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, and then remove masonry between saw cuts.

3.6 PATCHING AND REPAIRS

- A. General: Promptly repair damage to adjacent construction caused by selective demolition operations.
- B. Patching: Comply with Section 017329 "Cutting and Patching."
- C. Repairs: Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.
1. Completely fill holes and depressions in existing masonry that are to remain with an approved masonry patching material applied according to manufacturer's written recommendations.

3.7 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site. All materials to be disposed shall be removed from the site daily.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

END OF SECTION-02 41 13

SECTION 310000
EARTHWORK MATERIALS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Soil/Aggregate Materials.
 - 2. Geosynthetics.

1.3 REFERENCE STANDARDS

- A. New York State Department of Transportation (NYS DOT)
 - 1. NYSDOT 620 - Bank and Channel Protection
 - 2. NYSDOT 703 - Aggregates
 - 3. NYSDOT 733 - Earthwork Materials

1.4 SUBMITTALS

- A. Submittals for this Section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
- B. Manufacturer's installation instructions shall be provided along with product data.
- C. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
- D. Product Data: Submit name of imported materials source.
- E. Qualification Data: For ASTM certified soils testing agency.
- F. Material Test Reports: For each soil material proposed for fill and backfill as follows:
 - 1. Classification according to ASTM D2487.
 - 2. Laboratory compaction curve according to [ASTM D698].

G. Source Quality-Control Submittals:

1. Subbase Materials: Provide name and location of source and the NYSDOT Source Number. If the material is not being taken from an approved NYSDOT source, the soil laboratory test results for gradation and soundness tests performed by an ASTM certified soils laboratory will be required.
2. Other Aggregates: Provide name and location of source and soil laboratory test results for gradation and soundness tests performed by an ASTM certified soils laboratory.
3. Topsoil: Topsoil used on this project shall be tested by a certified soils laboratory for organic matter, Ph value, and gradation, and must be approved before placement.

H. Supplier's Certificate: Certify that products meet or exceed specified requirements.

1.5 QUALITY ASSURANCE

- A. Furnish each aggregate and/or topsoil material from a single source throughout the Work.

PART 2 - PRODUCTS

2.1 SOIL/STONE MATERIALS

A. Select Granular Fill.

1. Description: Stockpiled, sound, durable, sand, gravel, stone, or blends of these materials.
2. Quality: Free of organic and other deleterious materials.
3. Magnesium Sulfate Soundness Test: 20% maximum loss by weight after four test cycles.
4. Plasticity Index: The plasticity index of the material passing the No. 40 mesh sieve shall not exceed 5.0.
5. Elongated Particles: Not more than 30%, by weight, of the particles retained on a ½ inch sieve will consist of flat or elongated particles. A flat or elongated particle is defined as one which has its greatest dimension more than three times its least dimension.
6. Comply with the gradation requirements specified below:

| Sieve Size | Percent Passing |
|------------|-----------------|
| 4 inch | 100 |
| 1/4 inch | 30-65 |
| No. 40 | 5-40 |
| No. 200 | 0-10 |

B. Subbase Course Type 2.

1. Description: Stockpiled, crushed ledge rock or approved blast furnace slag.
2. Quality: Free of organic and other deleterious materials.
3. Magnesium Sulfate Soundness Test: 20% maximum loss by weight after four test cycles.
4. Plasticity Index: The plasticity index of the material passing the No. 40 mesh sieve shall not exceed 5.0.

5. Elongated Particles: Not more than 30%, by weight, of the particles retained on a ½ inch sieve will consist of flat or elongated particles. A flat or elongated particle is defined as one which has its greatest dimension more than three times its least dimension.
6. Comply with the gradation requirements specified below:

| Sieve Size | Percent Passing |
|------------|-----------------|
| 2 inch | 100 |
| 1/4 inch | 25-60 |
| No. 40 | 5-40 |
| No. 200 | 0-10 |

C. 3/4 inch Clean Crushed Stone, AASHTO M43 No. 67

1. Source: [**Imported Borrow**]
2. Composition: Clean, angular crushed stone, free of fines, organic matter, clay lumps, and other deleterious substances.
3. Los Angeles abrasion loss: 40% maximum when tested in accordance with AASHTO T96.
4. Soundness loss (sodium sulfate, 5 cycles): 12% maximum when tested in accordance with AASHTO T104.
5. Quality: Free of organic and other deleterious materials.
6. Acceptable equivalents: NYSDOT item 703-02 Coarse Aggregate, Size Designation No. 2, provided the material conforms to the gradation below:

| Sieve Size | Percent Passing |
|------------|-----------------|
| 1 inch | 100 |
| 3/4 inch | 90-100 |
| 3/8 inch | 20-55 |
| No. 4 | 0-10 |
| No. 8 | 0-5 |
| No. 200 | 0-2 |

D. Rip Rap.

1. Description: **Medium** stone filling that complies with NYSDOT Article 620-2.02 for stone filling.
2. End Dumped: Conform to NYSDOT Table 733-21A, Stone Filling Gradation Requirements for stone filling.

| Stone Filling Gradation | | |
|-------------------------|---------------------------|----------------------------|
| Stone Filling Item | Stone Size | Percent of Total By Weight |
| Fine | Smaller than 8 inches | 90-100 |
| | Larger than 3 inches | 50-100 |
| | Smaller than No. 10 Sieve | 0-10 |
| Light | Lighter than 100 lbs | 90-100 |
| | Larger than 6 inches | 50-100 |
| | Smaller than ½ inch | 0-10 |
| Medium | Heavier than 100 lbs | 50-100 |
| | Smaller than 4 inches | 0-10 |
| Heavy | Heavier than 600 lbs | 50-100 |

| Stone Filling Gradation | | |
|--------------------------------|-----------------------|-----------------------------------|
| Stone Filling Item | Stone Size | Percent of Total By Weight |
| | Smaller than 6 inches | 0-10 |

3. Machine Placed: Stones shaped as nearly as practicable in the form of right rectangular prisms. Fifty percent, by weight, of the stones shall weigh in excess of 300 pounds each, and the remainder of the stones shall weigh from 100 to 300 pounds each. One dimension of each stone shall be at least equal to the thickness of the riprap.

E. Riprap Bedding Material

1. Stockpiled, crushed stone, crushed air-cooled blast furnace slag, or gravel, free from organic and other deleterious materials. Comply with the gradation and material requirements specified below

| Sieve Size | Percent Passing by Weight |
|-------------------|----------------------------------|
| 4 inches | 100 |
| 2 inches | 40-60 |
| 1/2 inch | 0-15 |
| No. 200 | 0-2 |

F. Topsoil:

1. Description: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for vegetation growth. Material shall be original loam topsoil, well drained homogeneous texture and of uniform grade, without the admixture of subsoil material and entirely free of dense material, hardpan, sod, or any other objectionable foreign material.
2. Organic Content: Containing not less than 4 percent nor more than 20 percent organic content in that portion of a sample passing a 1/4 inch sieve, when determined by the wet combustion method on a sample dried at 105 degrees C.
3. pH: Containing a Ph value within the range of 4.5 to 7 on that portion of the sample passing a 1/4 inch sieve.
4. Comply with the gradation requirement specified below:

| Sieve Size | Percent Passing |
|-------------------|---------------------------------|
| 1 inch | 100 |
| 1/4 inch | 97 - 100 |
| No. 200 | 20 - 65 (of the 1/4 inch sieve) |

2.2 Geosynthetics

A. Geotextile Separation Fabric

- a. Propex Geotex 200ST
- b. Approved equivalent.

PART 3 - EXECUTION

3.1 UNDERGROUND UTILITIES

- A. Locate existing underground utilities prior to commencing excavation work. Determine exact utility locations by hand excavated test pits. Support and protect utilities to remain in place.
- B. Do not interrupt existing utilities that are in service until temporary or new utilities are installed and operational.
- C. Utilities to remain in service: Shall be re-routed as shown on the Contract Drawings.
- D. Utilities located outside the limits specified above may be abandoned in place provided their ends are adequately plugged as described below.
 - 1. Permanently close open ends of abandoned underground utilities exposed by excavations, which extend outside the limits of the area to be excavated.
 - 2. Close open ends of metallic conduit and pipe with threaded galvanized metal caps or plastic plugs or other approved method for the type of material and size of pipe. Do not use wood plugs.
 - 3. Close open ends of concrete and masonry utilities with concrete or flow-able fill.

3.2 EXCAVATION

- A. Excavate earth as required for the Work.
- B. Install and maintain all erosion and sedimentation controls during all earthwork operations as specified on the Contract Drawings or as directed by local officials. If the erosion and sedimentation controls specified by the local officials are more stringent than those specified on the Contract Drawings contact the Director's Representative.
- C. Maintain sides and slopes of excavations in a safe condition until completion of backfilling. Comply with Code of Federal Regulations Title 29 - Labor, Part 1926 (OSHA).
 - 1. Trenches: Deposit excavated material on one side of trench only. Trim banks of excavated material to prevent cave-ins and prevent material from falling or sliding into trench. Keep a clear footway between excavated material and trench edge. Maintain areas to allow free drainage of surface water.
- D. Concrete Slabs, Floors and Bases: Excavate to the following depths below bottom of concrete for addition of select granular material:
 - 1. Exterior Slabs and Steps: 12 inches unless otherwise indicated.
- E. Pavement: Excavate to subgrade surface elevation.
- F. Unauthorized Excavations: Unless otherwise directed, backfill unauthorized excavation under footings, foundation bases, and retaining walls with compacted select granular material without

altering the required footing elevation. Elsewhere, backfill and compact unauthorized excavation as specified for authorized excavation of the same classification, unless otherwise directed by the Director.

1. Unauthorized excavations under structural Work such as footings, foundation bases, and retaining walls shall be reported immediately to the Director before any concrete or back-filling Work commences.
- G. Notify the Director's Representative upon completion of excavation operations. Do not proceed with the Work until the excavation is inspected and approved. Inspection of the excavation by the Director's Representative will be made on 3 working days notice.

3.3 DEWATERING

- A. Prevent surface and subsurface water from flowing into excavations and trenches and from flooding the site and surrounding area.
- B. Do not allow water to accumulate in excavations or trenches. Remove water from all excavations immediately to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to the stability of subgrades and foundations. Furnish and maintain pumps, sumps, suction and discharge piping systems, and other system components necessary to convey the water away from the Site.
- C. Convey water removed from excavations, and rain water, to collecting or run-off area. Cut and maintain temporary drainage ditches and provide other necessary diversions outside excavation limits for each structure. Do not use trench excavations as temporary drainage ditches.
- D. Provide temporary controls to restrict the velocity of discharged water as necessary to prevent erosion and siltation of receiving areas.

3.4 PLACING FILTER FABRIC

- A. Place and overlap filter fabric in accordance with the manufacturer's installation instructions, unless otherwise shown.
- B. Cover tears and other damaged areas with additional filter fabric layer extending 3 feet beyond the damage.
- C. Do not permit traffic or construction equipment directly on filter fabric.
- D. Backfill over filter fabric within two weeks after placement. Backfill in accordance with the fabric manufacturer's instructions and in a manner to prevent damage to the fabric.

3.5 PLACING FILL AND BACKFILL

- A. Surface Preparation of Fill Areas: Strip topsoil, remaining vegetation, and other deleterious materials prior to placement of fill. Remove all asphalt pavement in its entirety from areas requiring the placement of fill or break up old pavements to a maximum size of four inches. Prior to placement of fill, smooth out and compact areas where wheel rutting has occurred due to stripping or earth-work operations.

- B. Excavations: Backfill as promptly as practicable, but only after approval by the Director's Representative. Do not backfill with excavated material unless it meets the requirements of this Section.
- C. Place backfill and fill materials in layers not more than 8 inches thick in loose depth unless otherwise specified. Before compaction, moisten or aerate each layer as necessary to facilitate compaction to the required density. Do not place backfill or fill material on surfaces that are muddy, frozen, or covered with ice.
 - 1. Place fill and backfill against foundation walls, and in confined areas (such as trenches) not easily accessible by larger compaction equipment, in maximum six inch thick (loose depth) layers.
- D. Prevent wedging action of backfill against structures by placing backfill uniformly around structure to approximately same elevation in each layer. Place backfill against walls of structures containing basements or crawl spaces only after the first floor structural members are in place.
- E. Under Exterior Concrete Slabs and Steps:
 - 1. Up to Subgrade Surface Elevation: Place selected fill when fill or backfill is required.
 - 2. Subbase Material: Place 12 inches of select granular material over subgrade surface.
- F. Under Pavements and Walks:
 - 1. Up to Subgrade Surface Elevation: Place selected fill when fill or backfill is required.
 - 2. Subbase Material: Place as indicated.
- G. Landscaped Areas: Place suitable material when required to complete fill or backfill areas up to subgrade surface elevation. Do not use material containing rocks over four inches in diameter within the top 12 inches of suitable material.

3.6 COMPACTION

- A. All materials with exception of open graded stone (No. 2 Coarse aggregate, No. 1 Coarse aggregate, Item B-12, etc.):
 - 1. Compact each layer of fill and backfill for the following area classifications to the percentage of maximum density specified below and at a moisture content suitable to obtain the required densities, but at not less than three percent drier or more than two percent wetter than the optimum content as determined by ASTM D 698 (Standard Proctor).
 - a. Concrete Slabs and Steps: 95 percent.
 - b. Landscaped Areas: 90 percent.
 - c. Pavements and Walks: 95 percent.

2. If a compacted layer fails to meet the specified percentage of maximum density, the layer will be re-compacted and retested. If compaction cannot be achieved the material/layer will be removed and replaced. No additional material may be placed over a compacted layer until the specified density is achieved.

3.7 GRADING

- A. Rough Grading: Trim and grade area within the Grading Limit Line and excavations outside the limit line, required by this Contract, to a level of four inches below the finish grades indicated unless otherwise specified herein or where greater depths are indicated. Provide smooth uniform transition to adjacent areas.
- B. Finish Grading: Finish surfaces free from irregular surface changes, and as follows:
 1. Grassed Areas: Finish areas to receive topsoil to within 1 inch above or below the required subgrade surface elevations.
 2. Walks and Pavements: Place and compact subbase material as specified. Shape surface of areas to required line, grade and cross section, with the finish surface not more than 1/2 inch above or below the required subbase elevation.
 3. Building Slabs: Grade subbase material smooth and even, free of voids, compacted as specified to within 1/4 inch above or below required subbase elevation.
- C. Spread approved topsoil directly upon prepared subgrade surface to a depth measuring 4 inches after natural settlement of the topsoil has occurred in areas to be seeded or to receive sod. Place to greater depth when necessary to adjust grades to required elevations.
 1. Approved existing topsoil within the Grading Limit Line may be used. Provide additional topsoil from outside sources as required.
- D. Finish topsoil surface free of depressions which will trap water, free of stones over 1 inch in any dimension, and free of debris.

3.8 RESTORATION

- A. Restore pavements, walks, curbs, lawns, and other exterior surfaces damaged during performance of the Work to match the appearance and performance of existing corresponding surfaces as closely as practicable.
- B. Topsoil and seed or sod damaged lawn areas outside the GLL and new lawn areas inside the GLL. Water as required until physical completion of the Work.

3.9 DISPOSAL OF EXCESS AND UNSUITABLE MATERIALS

- A. Remove from State property and dispose of excess and unsuitable materials, including materials resulting from clearing and grubbing and removal of existing improvements.

3.10 FIELD QUALITY CONTROL

- A. Compaction Testing: Notify the Director's Representative at least 3 working days in advance of all phases of filling and backfilling operations. Compaction testing will be performed by the

Director's Representative to ascertain the compacted density of the fill and backfill materials. Compaction testing will be performed on certain layers of the fill and backfill as determined by the Director's Representative. If a compacted layer fails to meet the specified percentage of maximum density, the layer shall be re-compacted and will be retested. No additional material may be placed over a compacted layer until the specified density is achieved.

3.11 PROTECTION

- A. Protect graded areas from traffic and erosion, and keep them free of trash and debris.

END OF SECTION 31000

SECTION 310101

SITE RESTORATION

PART 1 GENERAL

1.1 QUALITY ASSURANCE

- A. Provide prepackaged seed readily available to the public with quality and purity equal to product of O.M. Scotts and Son, Marysville, OH 43041. On-the-job or made-to-order mixes will not be accepted.

1.2 DELIVERY STORAGE AND HANDLING

- A. Deliver fertilizer in manufacturer's standard size bags or cartons showing weight, analysis, and the name of the manufacturer. Store as approved by Director's Representative.
- B. Store all seed at the site in a cool dry place as approved by the Director's Representative. Replace any seed damaged during storage.

1.3 SCHEDULING

- A. Time For Seeding: Optimum period to sow permanent grass seed is generally between April 1st and May 15th or between August 15th and October 1st. Schedule application for when weather conditions permit or as Directed.
 - 1. Provide temporary seed and mulch when final grading is complete while waiting for optimal seeding period.
 - 2. Provide temporary seed and mulch for temporary cover on disturbed ground not to be worked on for more than 7 days.
 - 3. Provide temporary seed and mulch on disturbed earth prior to temporary shutdown of construction.

PART 2 PRODUCTS

2.1 TOPSOIL

- A. Provide topsoil conforming to the following:
 - 1. Original loam topsoil, well drained homogeneous texture and of uniform grade, without the admixture of subsoil material and entirely free of dense material, hardpan, sod, or any other objectionable foreign material.
 - 2. Containing not less than 4 percent nor more than 20 percent organic matter in that portion of a sample passing a 1/4 inch sieve when determined by the wet combustion method on a sample dried at 105 degrees C.
 - 3. Containing a Ph value within the range of 4.5 to 7 on that portion of the sample that passes a 1/4 inch sieve.
 - 4. Containing the following gradations:

| SIEVE DESIGNATION | PERCENT PASSING |
|--------------------------|---------------------------------|
| 1 inch | 100 |
| 1/4 inch | 97 - 100 |
| No. 200 | 20 - 65 (of the 1/4 inch sieve) |

2.2 FERTILIZER

- A. Fertilizer: Mixed commercial fertilizers shall contain total nitrogen, available phosphoric acid and soluble potash in the ratio of 10-6-4 (50% N/UF). 50% of total nitrogen shall be derived from ureaform furnishing a minimum of 3.5% water insoluble nitrogen (3.5% WIN). The balance of the nitrogen shall be present as methylene urea, water-soluble urea, nitrate and ammoniacal compounds.
- B. Other fertilizers meeting DOT Specification Section 713-03 Fertilizer can be used.

2.3 SEED

- A. Furnish fresh, clean, new-crop seed mixed in the proportions specified for species and variety, and conforming to Federal and State Standards.
- B. Acceptable material in a seed mixture other than pure live seed consists of nonviable seed, chaff, hulls, live seed of crop plants and inert matter. The percentage of weed seed shall not exceed 0.1 percent by weight.
- C. All seed will be rejected if the label indicates any noxious weed seeds.
- D. Provide seed mixture equal to Scotts Pure Premium Sun and Shade North Grass Seed Mixture, comprised of the following:

| SEED MIXTURE | | | |
|--|-----------------------------------|-------------------|--------------------|
| AMOUNT BY WEIGHT IN MIXTURE | SPECIES OR VARIETY * | PERCENTAGE | |
| | | PURITY | GERMINATION |
| 30 PERCENT | FENWAY RED FESCUE | 97 PERCENT | 80 PERCENT |
| 30 PERCENT | ABBEY KENTUCKY BLUEGRASS BLEND | 95 PERCENT | 80 PERCENT |
| 20 PERCENT | DEVINE PERENNIAL RYE | 98 PERCENT | 85 PERCENT |
| 20 PERCENT | ENCHANTED PERENNIAL RYE | 98 PERCENT | 85 PERCENT |
| 100 PERCENT | | | |

*Variety may be altered depending on availability of seed from manufacturer.

2.4 MULCH

- A. Dry Application, Straw: Stalks of oats, wheat, rye or other approved crops that are free of noxious weed seeds. Weight shall be based on a 15 percent moisture content.

PART 3 EXECUTION

3.1 GRADING

- A. Rough Grading: Trim and grade lawn areas within the Contract Limit to a level of 4 inches below the finish grades indicated unless otherwise specified herein or where greater depths are indicated. Provide smooth uniform transition to adjacent areas.
- B. Finish Grading: Finish surfaces free from irregular surface changes, and as follows:
 - 1. Grassed Areas: Finish areas to receive topsoil to within 1 inch above or below the required subgrade surface elevations.

3.2 SPREADING TOPSOIL

- A. Perform topsoil spreading operations only during dry weather.
- B. To insure a proper bond with the topsoil, harrow or otherwise loosen the subgrade to a depth of 3 inches before spreading topsoil.
- C. Spread topsoil directly upon prepared subgrade to a minimum depth measuring 4 inches after natural settlement in areas to be seeded. Smooth out unsightly variations, bumps, ridges, and depressions that will hold water. Remove stones, litter, or other objectionable material. Finished surfaces shall conform to the contour lines and elevations indicated on the drawings or fixed by the Director's Representative.

3.3 PREPARATION FOR SEEDING

- A. Seed Bed: Scarify soil to a depth of 2 inches in compacted areas. Smooth out unsightly variations, bumps, ridges, and depressions that will hold water. Remove stones, litter, or other objectionable material.

3.4 FERTILIZING

- A. Apply 10-6-4 fertilizer evenly at the rate of 40 pounds per 1000 sq ft .

3.5 SEEDING

- A. Assume all risks when seed is sowed before approval of seed analysis.
- B. Do not seed when the wind velocity exceeds 5 miles per hour.
- C. Application Rate: 8 pounds per 1000 sq ft.
- D. Dry Application: Sow seed evenly by hand or seed spreader on dry or moderately dry soil.

3.6 MULCHING

- A. Dry Application: Within 3 days after seeding, cover the seeded areas with a uniform blanket of straw mulch at the rate of 50 pounds per 1000 sq ft of seeded area.

3.7 LAWN ESTABLISHMENT

- A. Maintain the grass at heights between 3 inches and 3-1/2 inches on a weekly basis until the Final Acceptance of the Work.

3.8 FINAL ACCEPTANCE

- A. Final acceptance of seeded areas will be granted when a uniform stand of acceptable grass is obtained, with a minimum of 95 percent coverage. Portions of the seeded areas may be accepted at various times at the discretion of the Director's Representative.
- B. Unacceptable seeded areas, dry application: Reseed as specified and fertilized at one-half the specified rate.
- C. Once accepted, the State will assume all maintenance responsibilities.

END OF SECTION 310101

SECTION 312316

EXCAVATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Soil densification.
2. Excavating for building foundations.
3. Excavating for **paving**.
4. Excavating for slabs on grade.
5. Excavating for Site structures.
6. Excavating for landscaping.

1.2 SUBMITTALS

- ###### A. Excavation Protection Plan: Describe sheeting, shoring, and bracing materials and installation, as required, to protect excavations and adjacent structures and property. Include structural calculations to support plan.

1.3 QUALITY ASSURANCE

- ###### A. Licensed Professionals Qualifications: **Professional engineer** experienced in design of specified Work and licensed in State of **New York**.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Perform Work according to:

1. The State of **NY** Department of Transportation standards.
2. The **Town of Queensbury** Department of Public Works standards.

PART 3 - EXECUTION

3.1 PREPARATION

- ###### A. Call local utility line information service **Dig Safe** not less than **three** working days before performing Work.

- B. Request that underground utilities be located and marked within and immediately surrounding **construction areas**.
- C. Identify required lines, levels, contours, and data.
- D. Existing Utilities:
 - 1. Protect from damage utilities indicated to remain.
- E. Protect plant life, lawns, and other features designated to remain as portion of final landscaping.
- F. Protect benchmarks, **existing structures, fences, sidewalks, paving, curbs**, and survey control points from excavating equipment and vehicular traffic.
- G. Erect and maintain temporary barriers and security devices **at indicated locations**, including warning signs, warning lights, and similar measures, for protection of the **public**.

3.2 EXCAVATION

- A. Underpin adjacent structures which may be damaged by excavation Work.
- B. Excavate subsoil to accommodate **paving, Site structures**, and construction operations.
- C. Excavate to working elevation for piling Work.
- D. Compact disturbed load-bearing soil in direct contact with foundations to original bearing capacity as specified in **Section 312316.13 Trenching**.
- E. Slope banks with machine **to angle of repose or less until shored**.
- F. Do not interfere with **45-degree** bearing splay of foundations.
- G. Removal of Deleterious Materials:
 - 1. Remove lumped subsoil, boulders, and rock up to **1/3 cu. yd.** measured by volume.
 - 2. Remove larger material as specified in Section **312323 Fill and Embankment Reconstruction**.
 - 3. Remove excess and unsuitable material from Site.
- H. Correct over-excavated areas **as specified in Section 312323 Fill and Embankment Reconstruction as directed by Engineer**.
 - 1. Remove excavated material from Site.
 - 2. Stockpile subsoil in area designated on Site to depth not exceeding **8 feet** and protect from erosion.
- I. Repair or replace items indicated to remain that have been damaged by excavation.

3.3 FIELD QUALITY CONTROL

- A. Request visual inspection of bearing surfaces by **Engineer** before installing subsequent Work.

3.4 PROTECTION

- A. Prevent displacement or loose soil from falling into excavation and maintain soil stability.
- B. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.
- C. Protect structures, utilities, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards that may be created by earth operations.

END OF SECTION 312316

SECTION 312319

DEWATERING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Construction dewatering.

B. Related Requirements:

1. Section 312513 Erosion and Sediment Control for temporary storm water pollution controls mandated under the EPA's National Pollutant Discharge Elimination System.
2. Section 310000 Earthwork for excavating, backfilling, site grading, and controlling surface-water runoff and ponding.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Verify availability of Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
2. Review condition of site to be dewatered, including coordination with temporary erosion-control measures and temporary controls and protections.
3. Review geotechnical report.
4. Review proposed site clearing and excavations.
5. Review existing utilities and subsurface conditions.
6. Review observation and monitoring of dewatering system.

1.3 ACTION SUBMITTALS

A. Shop Drawings: For dewatering system, prepared by or under the supervision of a qualified professional engineer.

1. Include plans, elevations, sections, and details.
2. Show arrangement, locations, and details of wells and well points; locations of risers, headers, filters, pumps, power units, and discharge lines; and means of discharge, control of sediment, and disposal of water.
3. Include layouts of piezometers and flow-measuring devices for monitoring performance of dewatering system.
4. Include written plan for dewatering operations, including sequence of well and well-point placement coordinated with excavation shoring and bracings and control procedures to be adopted if dewatering problems arise.

- B. Delegated Design Submittals: For dewatering system, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.4 INFORMATIONAL SUBMITTALS

- A. Field Quality-Control Submittals:
 - 1. Field quality-control reports.
- B. Qualification Statements: For Installer.
- C. Delegated design engineer qualifications.
- D. Existing Conditions: Using photographs or video recordings, show existing conditions of adjacent construction and site improvements that might be misconstrued as damage caused by dewatering operations. Submit before Work begins.
- E. Record Drawings: Identify locations and depths of capped wells and well points and other abandoned-in-place dewatering equipment.

1.5 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Installer: An experienced installer that has specialized in design of dewatering systems and dewatering work.
 - 2. Delegated Design Engineer: A professional engineer who is legally qualified to practice in State where Project is located and who is experienced in providing engineering services of the type indicated.
 - 3. Land Surveyor: A professional land surveyor who is legally qualified to practice in state where Project is located.

1.6 FIELD CONDITIONS

- A. Project-Site Information: A geotechnical report has been prepared for this Project and is available for information only. The opinions expressed in this report are those of a geotechnical engineer and represent interpretations of subsoil conditions, tests, and results of analyses conducted by a geotechnical engineer. Owner is not responsible for interpretations or conclusions drawn from this data.
 - 1. Make additional test borings and conduct other exploratory operations necessary for dewatering in accordance with the performance requirements.
 - 2. The geotechnical report is included elsewhere in Project Manual.
- B. Survey Work: Engage a qualified land surveyor or professional engineer to survey adjacent existing buildings, structures, and site improvements; establish exact elevations at fixed points to act as benchmarks. Clearly identify benchmarks and record existing elevations.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design dewatering system.
- B. Dewatering Performance: Design, furnish, install, test, operate, monitor, and maintain dewatering system of sufficient scope, size, and capacity to control hydrostatic pressures and to lower, control, remove, and dispose of groundwater and permit excavation and construction to proceed on dry, stable subgrades.
 - 1. Design dewatering system, including comprehensive engineering analysis by a qualified professional engineer.
 - 2. Continuously monitor and maintain dewatering operations to ensure erosion control, stability of excavations and constructed slopes, prevention of flooding in excavation, and prevention of damage to subgrades and permanent structures.
 - 3. Prevent surface water from entering excavations by grading, dikes, or other means.
 - 4. Accomplish dewatering without damaging existing buildings, structures, and site improvements adjacent to excavation.
 - 5. Remove dewatering system when no longer required for construction.
- C. Regulatory Requirements: Comply with governing EPA notification regulations before beginning dewatering. Comply with water- and debris-disposal regulations of authorities having jurisdiction.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by dewatering operations.
 - 1. Prevent surface water and subsurface or groundwater from entering excavations, from ponding on prepared subgrades, and from flooding site or surrounding area.
 - 2. Protect subgrades and foundation soils from softening and damage by rain or water accumulation.
- B. Install dewatering system to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
- C. Provide temporary grading to facilitate dewatering and control of surface water.

- D. Protect and maintain temporary erosion and sedimentation controls, which are specified in Section 015000 Temporary Facilities and Controls, and Section 312513 Erosion and Sediment Control during dewatering operations.

3.2 INSTALLATION

- A. Install dewatering system utilizing wells, well points, or similar methods complete with pump equipment, standby power and pumps, filter material gradation, valves, appurtenances, water disposal, and surface-water controls.
 - 1. Space well points or wells at intervals required to provide sufficient dewatering.
 - 2. Use filters or other means to prevent pumping of fine sands or silts from the subsurface.
- B. Place dewatering system into operation to lower water to specified levels before excavating below groundwater level.
- C. Provide sumps, sedimentation tanks, and other flow-control devices as required by authorities having jurisdiction.
- D. Provide standby equipment on-site, installed and available for immediate operation, to maintain dewatering on continuous basis if any part of system becomes inadequate or fails.

3.3 OPERATION

- A. Operate system continuously until drains, sewers, and structures have been constructed and fill materials have been placed or until dewatering is no longer required.
- B. Operate system to lower and control groundwater to permit excavation, construction of structures, and placement of fill materials on dry subgrades. Drain water-bearing strata above and below bottom of foundations, drains, sewers, and other excavations.
 - 1. Do not permit open-sump pumping that leads to loss of fines, soil piping, subgrade softening, and slope instability.
 - 2. Reduce hydrostatic head in water-bearing strata below subgrade elevations of foundations, drains, sewers, and other excavations.
 - 3. Maintain piezometric water level a minimum of 12 inches below bottom of excavation.
- C. Dispose of water removed by dewatering in a manner that avoids endangering public health, property, and portions of work under construction or completed. Dispose of water and sediment in a manner that avoids inconvenience to others.
- D. Remove dewatering system from Project site on completion of dewatering. Plug or fill well holes with sand or cut off and cap wells a minimum of 36 inches below overlying construction.

3.4 FIELD QUALITY CONTROL

- A. Observation Wells: Provide observation wells or piezometers, take measurements, and maintain at least the minimum number indicated; additional observation wells may be required by authorities having jurisdiction.

1. Observe and record daily elevation of groundwater and piezometric water levels in observation wells.
 2. Repair or replace, within 24 hours, observation wells that become inactive, damaged, or destroyed. In areas where observation wells are not functioning properly, suspend construction activities until reliable observations can be made. Add or remove water from observation-well risers to demonstrate that observation wells are functioning properly.
 3. Fill observation wells, remove piezometers, and fill holes when dewatering is completed.
- B. Survey-Work Benchmarks: Resurvey benchmarks regularly during dewatering and maintain an accurate log of surveyed elevations for comparison with original elevations. Promptly notify Architect if changes in elevations occur or if cracks, sags, or other damage is evident in adjacent construction.
- C. Provide continual observation to ensure that subsurface soils are not being removed by the dewatering operation.
- D. Prepare reports of observations.
- 3.5 PROTECTION
- A. Protect and maintain dewatering system during dewatering operations.
- B. Promptly repair damages to adjacent facilities caused by dewatering.

END OF SECTION 312319

SECTION 312323

FILL AND EMBANKMENT RECONSTRUCTION

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:

1. Placement and compaction of fill for pond embankment repair and reconstruction.
2. Preparation of subgrade and existing embankment surfaces to receive fill.
3. Suitable excavated material and imported fill.
4. Moisture conditioning and compaction of fill.
5. Placement of fill adjacent to sheet piling, storm drainage pipe, and drainage structures.
6. Shaping and grading of embankment slopes and crest.
7. Removal and disposal of unsuitable and excess materials.

B. Related Sections:

1. Section 310000 - Earthwork.
2. Section 312319 - Dewatering.
3. Section 312333 - Trenching and Backfilling for Storm Drainage.
4. Section 312513 - Erosion and Sediment Control.
5. Section 314113 - Cold-Formed Steel Sheet Piling - Subsurface Seepage Cutoff Wall.
6. Section 321216 - Asphalt Paving.
7. Section 329120 - Topsoil.
8. Section 329219 - Seeding.
9. Section 334104 - Storm Drain Pipe.

1.2 REFERENCES

- A. ASTM International:
 - 1. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort.
 - 2. ASTM D1556 - Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method.
 - 3. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes, Unified Soil Classification System.
 - 4. ASTM D6938 - Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods.
- B. New York State Department of Transportation Standard Specifications, current edition, where referenced.

1.3 DEFINITIONS

- A. Embankment Fill: Soil or granular material placed and compacted to reconstruct the pond embankment to the lines and grades shown on the Drawings.
- B. Suitable Excavated Material: On-site excavated material approved by Engineer for reuse as fill, free of organic matter, topsoil, roots, debris, frozen material, excessive moisture, and other deleterious materials.
- C. Imported Fill: Off-site fill material furnished by Contractor and approved by Engineer for use where suitable on-site material is not available or where indicated on the Drawings.
- D. Unsuitable Material: Material that, in the opinion of Engineer, is not suitable for use as embankment fill, structure backfill, pavement subgrade, or slope reconstruction. Unsuitable material includes topsoil, organic soil, peat, muck, roots, stumps, debris, trash, frozen material, highly plastic soil, material containing deleterious substances, and material that cannot be compacted to the specified density.
- E. Subgrade: Existing ground or prepared excavation surface upon which fill is placed.
- F. Lift: A layer of fill placed before compaction.

1.4 SUBMITTALS

- A. Material Test Reports:
 - 1. Gradation and classification test results for each proposed imported fill source.
 - 2. Standard Proctor test results in accordance with ASTM D698 for each material requiring compaction testing.
 - 3. Moisture-density relationship for proposed embankment fill materials.

- B. Samples:
 - 1. Submit representative samples of imported fill material when requested by Engineer.
- C. Quality Control Submittals:
 - 1. Source and description of imported fill materials.
 - 2. Proposed fill placement and compaction equipment.
 - 3. Proposed sequence for embankment reconstruction, including coordination with sheet pile installation, storm drainage installation, and erosion control measures.
 - 4. Proposed disposal location for unsuitable or excess material, if requested by Engineer.

1.5 QUALITY ASSURANCE

- A. Perform fill placement and compaction in accordance with this Section, Section 310000, and the Contract Drawings.
- B. Do not place fill until subgrade has been observed and accepted by Engineer or Owner's Representative.
- C. Testing agency may perform field density and moisture tests during fill placement. Cooperate with testing agency and provide access to the Work.
- D. Where requirements of this Section conflict with Section 310000, comply with the more stringent requirement.

1.6 PROJECT CONDITIONS

- A. Protect existing cemetery improvements, utilities, pavements, drainage facilities, pond areas, vegetation to remain, and adjacent properties from damage.
- B. Maintain erosion and sediment controls during fill placement. Do not place fill in a manner that allows sediment to enter the pond, storm drainage system, wetlands, watercourses, or adjacent properties.
- C. Do not place fill on frozen ground, in standing water, on snow or ice, or on unstable, pumping, or excessively wet subgrade.
- D. Do not use frozen material as fill.
- E. Coordinate fill placement with water control and dewatering requirements. Maintain fill placement areas in a stable condition suitable for compaction.

PART 2 – PRODUCTS

2.1 EMBANKMENT FILL

- A. Embankment fill shall consist of select Granular Fill complying with Section 31000 or as approved by Engineer.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verify existing grades, excavation limits, embankment repair limits, and proposed final grades before beginning fill placement.
- B. Notify Engineer of unsuitable, unstable, soft, wet, organic, or otherwise questionable subgrade conditions before placing fill.
- C. Do not proceed with fill placement until unsatisfactory conditions have been corrected and accepted by Engineer.

3.2 PREPARATION OF AREAS TO RECEIVE FILL

- A. Strip topsoil, vegetation, roots, debris, and unsuitable material from areas to receive fill.
- B. Excavate unsuitable material to the limits shown on the Drawings or as directed by Engineer.
- C. Scarify existing subgrade to a minimum depth of 6 inches before placing fill, unless otherwise directed by Engineer.
- D. Moisture condition and compact scarified subgrade to the specified density before placing fill.
- E. Where fill is placed against existing embankment slopes, bench or key the existing slope as shown on the Drawings. Where benching is not shown, provide horizontal benches sufficient to bond new fill to existing embankment and reduce slippage along the interface.
- F. Keep prepared subgrades free of standing water, loose soil, frozen material, and debris until fill is placed.

3.3 PLACING FILL

- A. Place fill to the lines, grades, slopes, and elevations shown on the Drawings.
- B. Place fill in uniform, approximately horizontal lifts.
- C. Loose lift thickness shall not exceed 8 inches before compaction unless otherwise approved by Engineer based on equipment and successful compaction results.

- D. Place fill in thinner lifts where required to achieve specified compaction, adjacent to structures, adjacent to sheet piling, around drainage pipe, or in confined areas.
- E. Do not place fill in a manner that causes displacement or damage to sheet piling, storm drainage pipe, drainage structures, geotextiles, erosion controls, or other Work.
- F. Place fill uniformly on both sides of structures, pipes, and other elements where unbalanced loading could cause displacement or damage.
- G. Do not operate heavy equipment directly over storm drainage pipe until minimum cover required by Section 312333, Section 334104, or the pipe manufacturer's requirements has been provided.

3.4 MOISTURE CONDITIONING

- A. Adjust moisture content of fill material as necessary to achieve specified compaction.
- B. If material is too dry, uniformly add water and mix before compaction.
- C. If material is too wet, aerate, disk, blend with drier approved material, or remove and replace with suitable material.
- D. Do not compact material when moisture content prevents achievement of specified density or causes pumping, rutting, or instability.

3.5 COMPACTION

- A. Compact each lift of fill to the following minimum percentages of maximum dry density as determined by ASTM D698:
 1. Embankment fill: 95 percent.
 2. Fill below access drive pavement, shoulders, or traffic areas: 95 percent.
 3. Fill below lawn or landscaped areas outside the embankment limits: 90 percent.
 4. Fill adjacent to drainage structures, pipes, and other appurtenances: 95 percent unless otherwise indicated.
- B. Compact fill using equipment suitable for the material, lift thickness, location, and required density.
- C. Use hand-operated or walk-behind compaction equipment in confined areas, adjacent to sheet piling, adjacent to pipe and drainage structures, and where larger equipment may damage the Work.
- D. If a compacted lift fails to meet specified requirements, scarify, moisture condition, recompact, and retest. Remove and replace material that cannot be compacted to specified density.
- E. Do not place additional fill over a lift that has failed compaction testing until the lift has been corrected and accepted.

3.6 PLACEMENT ADJACENT TO SHEET PILING

- A. Coordinate embankment fill placement with Section 314113.
- B. Do not place fill in a manner that damages, displaces, bends, or exposes the sheet piling cutoff wall.
- C. Place and compact fill adjacent to sheet piling in controlled lifts using equipment that will not damage the pile tops, interlocks, or coating at cut surfaces.
- D. Maintain final cover over buried sheet piling as shown on the Drawings.

3.7 PLACEMENT ADJACENT TO STORM DRAINAGE PIPE AND STRUCTURES

- A. Backfill storm drainage trenches in accordance with Section 312333.
- B. Coordinate embankment fill with drainage pipe installation to avoid damaging pipe, disturbing bedding, or changing line and grade.
- C. Where embankment fill is placed around drainage structures, place fill uniformly around each structure to approximately the same elevation on all sides.

3.8 GRADING AND TOLERANCES

- A. Shape embankment slopes, crest, shoulders, and transitions to the lines and grades shown on the Drawings.
- B. Finished subgrade below pavement or access drive areas shall be within 1/2 inch of required elevation unless otherwise indicated.
- C. Finished subgrade in areas to receive topsoil shall be within 1 inch of required elevation unless otherwise indicated.
- D. Finished embankment slopes shall be uniform and free of rills, gullies, abrupt breaks, low spots, loose uncompacted material, and debris.
- E. Repair settlement, erosion, rutting, or displacement occurring before final acceptance.

3.9 FIELD QUALITY CONTROL

- A. Notify Engineer and testing agency at least 24 hours before fill placement and compaction operations requiring testing or observation.
- B. Field density testing may be performed at locations and frequencies determined by Engineer or testing agency.
- C. Provide access, equipment, and assistance necessary for testing.
- D. Engineer may require proof rolling or other observation of prepared subgrade and compacted fill areas.

3.10 PROTECTION

- A. Protect fill areas from erosion, saturation, freezing, traffic damage, and disturbance.
- B. Maintain temporary drainage to prevent ponding on prepared subgrade or partially completed fill.
- C. Repair or replace fill damaged by erosion, water, freezing, construction traffic, or other causes before placing subsequent work.
- D. Maintain erosion and sediment controls until disturbed areas are stabilized.

3.11 DISPOSAL OF EXCESS AND UNSUITABLE MATERIAL

- A. Remove unsuitable material, excess excavated material, debris, and waste from Owner's property and legally dispose of off-site unless otherwise approved by Owner and Engineer.
- B. Do not bury debris, topsoil, organic material, unsuitable material, or waste within the embankment.
- C. Do not place unsuitable or excess material in the pond, wetlands, drainageways, cemetery areas outside the approved limits of disturbance, or other unauthorized areas.

END OF SECTION - 312323

SECTION 312333

TRENCHING AND BACKFILLING FOR STORM DRAINAGE

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:

1. Excavation of trenches for storm drainage pipe and appurtenances.
2. Preparation of trench foundation.
3. Pipe bedding, haunching, initial backfill, and final backfill.
4. Compaction of trench backfill.
5. Removal and disposal of unsuitable and excess materials.
6. Coordination with dewatering and erosion and sediment control requirements.
7. Surface restoration of disturbed trench areas, except where specified in other Sections.

B. Related Sections:

1. Section 310000 - Earthwork.
2. Section 312319 - Dewatering.
3. Section 312513 - Erosion and Sediment Control.
4. Section 321216 - Asphalt Paving.
5. Section 329120 - Topsoil.
6. Section 329219 - Seeding.
7. Section 334104 - Storm Drain Pipe.

1.2 REFERENCES

A. New York State Department of Transportation Standard Specifications, current edition.

B. ASTM International:

1. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort.
2. ASTM D2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.

3. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes, Unified Soil Classification System.
 4. ASTM D6938 - Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods.
- C. OSHA 29 CFR Part 1926, Subpart P - Excavations.

1.3 DEFINITIONS

- A. Trench Foundation: The undisturbed or prepared material at the bottom of the trench on which bedding is placed.
- B. Bedding: Material placed on the trench foundation to support the bottom of the pipe.
- C. Haunching: Material placed and compacted from the bedding elevation to the springline of the pipe.
- D. Initial Backfill: Material placed from the springline of the pipe to 12 inches above the top of pipe.
- E. Final Backfill: Material placed above initial backfill to finished subgrade or finished grade.
- F. Pipe Zone: The area including bedding, haunching, and initial backfill.
- G. Suitable Excavated Material: Excavated material free of organic matter, frozen material, debris, rock larger than 4 inches in greatest dimension, and other deleterious material, and acceptable to the Engineer for reuse as final backfill.
- H. Unsuitable Material: Material that, in the opinion of the Engineer, is not suitable for foundation support, pipe zone backfill, embankment fill, pavement support, or final backfill. Unsuitable material includes organic soil, peat, topsoil, highly plastic soil, debris, frozen material, excessively wet material, or material containing deleterious substances.

1.4 SUBMITTALS

- A. Product Data:
 1. Pipe bedding material.
 2. Imported trench backfill material, if proposed.
 3. Geotextile, where used for stabilization or separation.
- B. Material Test Reports:
 1. Gradation reports for imported bedding and backfill materials.
 2. Proctor test results for materials requiring compaction testing.
- C. Quality Control Submittals:

1. Proposed trench excavation, bedding, and backfill procedures.
2. Proposed method for maintaining trench stability and coordinating water control with Section 312319.
3. Proposed disposal location for excess or unsuitable material, if requested by Engineer.

1.5 QUALITY ASSURANCE

- A. Perform trenching and backfilling in accordance with this Section, Section 310000, ASTM D2321, and pipe manufacturer's written installation instructions. Where requirements conflict, comply with the more stringent requirement.
- B. Comply with OSHA requirements for trench safety, excavation support, sloping, benching, and access.
- C. Do not begin pipe installation until trench foundation and bedding conditions have been observed by the Engineer or Owner's Representative.

1.6 PROJECT CONDITIONS

- A. Locate existing underground utilities before beginning excavation. Notify New York 811 in accordance with applicable requirements before disturbing the ground.
- B. Protect existing utilities, structures, pavements, landscaping, cemetery improvements, and other facilities to remain.
- C. Maintain access for Owner operations, emergency vehicles, and cemetery visitors unless otherwise approved by Owner.
- D. Do not allow open trenches to remain overnight unless protected with barricades, fencing, plates, or other measures acceptable to Owner and authorities having jurisdiction.
- E. Protect excavations and backfill materials from freezing. Do not place bedding or backfill on frozen subgrade or use frozen material as backfill.

PART 2 – PRODUCTS

2.1 PIPE BEDDING AND PIPE ZONE MATERIAL

- A. Provide clean, durable, free-draining granular material consisting of crushed stone, crushed gravel, or gravel meeting the gradation indicated on the Drawings.
- B. Where gradation is not indicated on the Drawings, provide NYSDOT No. 1A, No. 1, No. 2, or other granular bedding material acceptable to the pipe manufacturer and Engineer.
- C. Material shall be free of organic matter, clay lumps, frozen material, debris, and deleterious substances.

- D. Where pipe manufacturer's installation instructions require a more restrictive bedding material, provide material complying with the manufacturer's requirements.
- E. Do not use native excavated material within the pipe zone unless specifically approved by the Engineer.

2.2 FINAL BACKFILL MATERIAL

- A. Below pavement, access drive, or other traffic areas: Provide select granular material, selected fill, or subbase material complying with Section 310000, unless otherwise indicated.
- B. Below lawn or landscaped areas: Suitable excavated material may be used if approved by Engineer and if free of unsuitable material, rocks larger than 4 inches in greatest dimension, organic matter, debris, and frozen material.

2.3 GEOTEXTILE

- A. Where required for trench stabilization or separation, provide geotextile complying with Section 310000 or as shown on the Drawings.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Verify lines, grades, invert elevations, structure locations, and pipe sizes before excavation.
- B. Establish temporary erosion and sediment controls before beginning trenching operations.
- C. Strip and stockpile topsoil separately from trench excavation material where trenches pass through lawn or landscaped areas.
- D. Sawcut pavement neatly where trenching crosses existing pavement to remain. Remove pavement to the limits indicated or required for trench excavation and restoration.

3.2 TRENCH EXCAVATION

- A. Excavate trenches to the lines, grades, and elevations indicated on the Drawings.
- B. Provide trench width sufficient to allow proper pipe installation, bedding placement, haunching, compaction, and inspection, while limiting disturbance to the minimum practical width.

- C. Unless otherwise required by pipe manufacturer or shown on the Drawings, provide minimum trench width at the top of pipe equal to the outside pipe diameter plus 12 inches on each side of the pipe.
- D. Excavate trench bottoms to allow placement of the required bedding thickness below the pipe barrel.
- E. Do not over-excavate. Where unauthorized excavation occurs below required trench bottom, restore to required elevation with compacted bedding material at no additional cost to Owner.
- F. Keep excavated material a sufficient distance from trench edges to maintain trench stability and comply with OSHA requirements.
- G. Remove rock, boulders, debris, organic material, soft material, and other unsuitable material encountered at trench bottom. Replace removed material with compacted bedding or stabilization material as directed by Engineer.

3.3 TRENCH FOUNDATION STABILIZATION

- A. Where trench bottom is unstable, soft, wet, or otherwise unsuitable to support pipe, notify Engineer before proceeding.
- B. Stabilize unsuitable trench foundation by over-excavating to the depth directed by Engineer and replacing with compacted crushed stone or other approved stabilization material.
- C. Where geotextile is required, place geotextile over prepared subgrade before placement of stabilization material. Overlap geotextile in accordance with manufacturer's recommendations, but not less than 18 inches.

3.4 WATER CONTROL IN TRENCHES

- A. Keep trenches free of standing water during excavation, bedding placement, pipe installation, jointing, and backfilling.
- B. Perform dewatering and dispose of water in accordance with Section 312319 - Dewatering and Section 312513 - Erosion and Sediment Control.
- C. Do not place bedding, pipe, or backfill in standing water or on softened, unstable, or disturbed trench foundation materials.
- D. Where water control operations disturb or soften the trench foundation, remove unsuitable material and replace with approved bedding or stabilization material as directed by Engineer.

3.5 BEDDING INSTALLATION

- A. Place bedding material on prepared trench foundation to the thickness shown on the Drawings. Where not shown, provide minimum bedding thickness of 6 inches below pipe barrel.
- B. Shape bedding to provide uniform, continuous support along the full length of pipe barrel. Provide recesses for bells, couplings, or joints so pipe bears uniformly on barrel and not on joints.
- C. Compact bedding before pipe placement to provide firm, uniform support.

3.6 PIPE INSTALLATION COORDINATION

- A. Install storm drain pipe in accordance with Section 334104 and pipe manufacturer's written instructions.
- B. Do not place pipe on blocking, mounds, frozen material, unsuitable material, or disturbed uncompacted subgrade.
- C. Maintain line and grade during placement of bedding, haunching, and backfill.

3.7 HAUNCHING AND INITIAL BACKFILL

- A. Place haunching material evenly on both sides of pipe from bedding elevation to springline.
- B. Work haunching material under pipe haunches by hand or with suitable tools to eliminate voids and provide continuous support. Do not disturb pipe alignment or grade.
- C. Place initial backfill from springline to 12 inches above top of pipe using pipe zone material unless otherwise indicated.
- D. Place haunching and initial backfill in lifts not exceeding 6 inches loose thickness, or as recommended by pipe manufacturer if more restrictive.
- E. Compact each lift uniformly on both sides of pipe. Do not use heavy compaction equipment directly over pipe until at least 12 inches of compacted cover has been placed above top of pipe, or greater cover if required by pipe manufacturer.
- F. Prevent displacement, damage, or deflection of pipe during backfilling.

3.8 FINAL BACKFILL

- A. Place final backfill after initial backfill has been completed and accepted.
- B. Place final backfill in uniform lifts not exceeding 8 inches loose thickness, unless otherwise approved by Engineer.
- C. Moisture-condition backfill as necessary to achieve required compaction.
- D. Do not place backfill that is frozen, muddy, excessively wet, contains organic matter, or otherwise unsuitable.

- E. Below pavements, access drives, and traffic areas, use select granular material, selected fill, or subbase material and compact as specified.
- F. Below lawns and landscaped areas, use approved suitable excavated material or imported suitable material. Place topsoil and seed in accordance with Section 329120 and Section 329219.

3.9 COMPACTION REQUIREMENTS

- A. Compact trench backfill to the following minimum percentages of maximum dry density as determined by ASTM D698:
 - 1. Pipe bedding, haunching, and initial backfill: 95 percent.
 - 2. Final backfill below pavement, access drives, shoulders, and other traffic areas: 95 percent.
 - 3. Final backfill below lawn or landscaped areas: 90 percent.
- B. Where pipe manufacturer's requirements are more stringent, comply with pipe manufacturer's requirements.
- C. Recompact and retest areas that fail to meet specified compaction requirements. Remove and replace material that cannot be compacted to specified density.

3.10 FIELD QUALITY CONTROL

- A. Notify Engineer and testing laboratory at least 24 hours before backfilling operations requiring observation or testing.
- B. Compaction testing may be performed at locations and frequencies determined by Engineer or Owner's testing agency.
- C. Do not place additional backfill over a lift that has failed compaction testing until the lift has been corrected and accepted.
- D. Engineer may require removal of backfill to verify bedding, haunching, pipe support, or compaction where installation is suspected to be deficient.

3.11 DISPOSAL OF EXCESS AND UNSUITABLE MATERIAL

- A. Remove excess excavated material, unsuitable material, debris, and waste from Owner's property and legally dispose of off-site unless otherwise approved by Owner.
- B. Do not bury debris, unsuitable material, or waste on-site.
- C. Do not place excavated material in the pond, wetlands, drainageways, or areas outside the approved limits of disturbance.

3.12 SURFACE RESTORATION

- A. Restore trench areas to lines, grades, and surfaces shown on the Drawings.
- B. Restore pavement areas in accordance with Section 321216 and details shown on the Drawings.
- C. Restore lawn and disturbed vegetated areas with topsoil and seed in accordance with Section 329120 and Section 329219.
- D. Maintain restored areas until accepted by Owner.

3.13 PROTECTION

- A. Protect installed pipe and backfilled trenches from construction traffic, erosion, settlement, and damage.
- B. Repair settlement, rutting, erosion, or other damage occurring before final acceptance.
- C. Maintain drainage through the work area during construction.

END OF SECTION - 312333

SECTION 321513

EROSION AND SEDIMENT CONTROL

PART 1 GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

- A. Earthwork: Section 310000

1.2 REFERENCES

- A. Erosion and Sediment Control Guidelines: Conform to the latest edition of “NEW YORK STANDARDS and SPECIFICATIONS for EROSION and SEDIMENT CONTROL” by NYS Department of Environmental Conservation DOW (i.e., Bluebook). Refer to these guidelines for construction and maintenance of all items (Temporary and Permanent Structural, Vegetative and Biotechnical) included in the Storm Water Pollution and Prevention Plan (SWPPP).

1.3 RESPONSIBILITY

- A. Install and maintain the temporary erosion and sediment control, as shown on the contract drawings before starting any grading or excavation. Maintain compliance with SPDES regulations. Provide any temporary erosion and sediment control measures that may be required within the limits of work, including any staging areas, throughout construction in conformance with the plan, and as directed by the Engineer.
- B. During construction conduct operations in such a manner as to prevent or reduce to a minimum any damage to any water body from pollution by debris, sediment, chemical or other foreign material, or from the manipulation of equipment and/or materials in or near a stream or ditch flowing directly to a stream. Any water which has been used for wash purposes or other similar operations which become polluted with sewage, silt, cement, concentrated chlorine, oil, fuels, lubricants, bitumens, or other impurities shall not be discharged into any water body.
- C. In the event of conflict between these specifications and the regulation of other Federal, State, or local jurisdictions, the more restrictive regulations shall apply.

1.4 DESCRIPTION

- A. The Work shall consist of furnishing, installing, inspecting, maintaining, and removing soil and erosion control measures as shown on the contract documents or as ordered by the Engineer during the life of the contract to provide erosion and sediment control.
- B. Temporary structural measures provide erosion control protection to a critical area for an interim period. A critical area is any disturbed, denuded slope subject to erosion. These are used during construction to prevent offsite sedimentation.

- C. Inspections of erosion and sediment control items will be completed by the Engineer. Comply with and correct all deficiencies found as a result of these inspections.

1.5 DEFINITIONS – TEMPORARY STRUCTURAL MEASURES

- A. Dust Control: Prevent surface and air movement of dust from disturbed soil surfaces.
- B. Storm Drain Inlet Protection: A semi-permeable barrier installed around storm inlets to prevent sediment from entering a storm drainage system.
- C. Concrete washout: A contained area for collecting concrete washout from delivery vessel at the end of each pour.

PART 2 PRODUCTS

2.1 COMPANIES-TEMPORARY STRUCTURAL

- A. Mirafi, 365 South Holland Drive, Pendergrass, Ga, 30567, (888) 795-0808, www.mirafi.com.
- B. North American Green, 14649 Highway 41 North, Evansville, IN 47725, (800) 772-2040, www.nagreen.com.
- C. Siltdam Inc., P.O. Box 960, Brockton MA, 02303, (800) 699-2374, www.spilldam.com.

PART 3 EXECUTION

3.1 WORK AREAS

- A. The Engineer has the authority to limit the surface area of erodible earth exposed by earthwork operations and to direct the Contractor to provide immediate temporary or permanent erosion measures to minimize damage to property and contamination of watercourses and water impoundments. Under no circumstances will the area of erodible earth material exposed at one time exceed 43,560 sq. ft. The Engineer may increase or decrease this area of erodible earth material exposed at one time as determined by his analysis of project, weather and other conditions.
- B. Schedule the work so as to minimize the time that earth areas will be exposed to erosive conditions. Provide temporary structural measures immediately to prevent any soil erosion.
- C. All erosion and sediment control devices must be maintained in working order until the site is stabilized. All preventative and remedial maintenance work, including clean out, repair, replacement, re-grading, re-seeding, or re-mulching, must be performed immediately.
- D. After final stabilization has been achieved temporary sediment and erosion controls must be removed. Areas disturbed during removal must be stabilized immediately.

END OF SECTION 312513

SECTION 314113

COLD-FORMED STEEL SHEET PILING – SUBSURFACE SEEPAGE CUTOFF WALL

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. This Section specifies furnishing and installing cold-formed steel sheet piling driven to form a continuous subsurface seepage cutoff wall as designed by the Engineer and shown on the Contract Drawings.
- B. The cutoff wall is a fully buried, non-structural seepage barrier. No portion of the sheet piling shall remain exposed above finished grade upon completion of construction.
- C. Nominal wall geometry: approximately 75 linear feet in plan, driven to the tip elevations established on the Drawings (approximately 20 feet below existing grade).
- D. The pile section, tip elevations, and wall alignment are fixed by the Engineer's design. The Contractor's responsibility is installation in conformance with the Drawings and this Specification.

1.2 RELATED SECTIONS

- Section 024113 Selective Demolition
- Section 024116 Structure Demolition
- Section 310000 Earthwork

1.3 REFERENCES

The following standards apply to the extent referenced:

- ASTM A857 – Standard Specification for Steel Sheet Piling, Cold Formed, Light Gauge
- ASTM A1011 – Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Allow
- ASTM A6 – General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling
- AASHTO M 202 – Steel Sheet Piling
- OSHA 29 – CFR Part 1926, Subpart P – Excavations
- NYSDOL Public Works Requirements (as applicable)

1.4 SUBMITTALS

- A. Submit the following in accordance with Section 013300 – Submittal Procedures prior to beginning pile installation:

- Product Data: Manufacturer's data sheets for the pile section to be furnished, confirming section designation, material specification, yield strength, section modulus, moment of inertia, web thickness, pile width, and interlock geometry,
 - Mill Certifications: Certified mill test reports for each heat of steel to be incorporated into the Work, demonstrating conformance with the specified material standard and minimum yield strength.
 - Shop Drawings: Plan layout of pile locations and numbering sequence, pile tip elevations, top-of-pile elevations after cutoff, and interlock orientation. Shop Drawings shall be consistent with and shall not deviate from the Contract Drawings.
 - Installation Equipment: Description of proposed driving equipment, including type, model, rated energy output or vibration frequency, and any template or guide system proposed.
 - Interlock Sealant: Product data sheet for proposed sealant, including manufacturer, material type, installation method, and compatibility with steel substrate and anticipated soil and groundwater conditions.
 - Installer Qualifications: Documentation as required by Article 1.05.
- B. Do not begin pile installation until submittals are reviewed and accepted by the Engineer.

1.5 QUALIFICATIONS

- A. Installer: The Contractor or designated Subcontractor responsible for pile installation shall have a minimum of five (5) years of continuous experience installing steel sheet piling, with a minimum of three (3) completed projects involving driven sheet piling for seepage control, retaining, or similar earthwork applications. Submit a project list with owner references upon request.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver sheet piling to the site in bundles identified by heat number, section designation, and length.
- B. Store piling on blocking clear of the ground surface to prevent distortion and prolonged contact with standing water or saturated soil.
- C. Protect interlocks from damage, debris accumulation, and deformation during storage and handling. Do not incorporate piling with deformed, kinked, or damaged interlocks into the Work.
- D. Handle piling with equipment and rigging appropriate to prevent permanent deformation. Do not allow wire rope or chains to bear directly against pile flanges or interlocks without protective padding.

PART 2 PRODUCTS

2.1 STEEL SHEET PILING

- A. General: Provide cold-formed steel sheet piling conforming to ASTM A857 or AASHTO M 202, fabricated from steel conforming to ASTM A1011, Grade 50.
- B. Minimum Mechanical Properties:
- Yield Strength: 50,000 psi minimum.
 - Tensile Strength: 65,000 psi minimum.
- C. Minimum Section Properties (per foot of wall):
- Section Modulus: 2.55 in³/ft
 - Moment of Inertia: 4.50 in⁴/ft
 - Nominal Pile Width: 21.65 inches
 - Nominal Web Thickness: 0.157 inches minimum
- D. Interlock: Interlock geometry shall be self-cleaning type designed to maintain continuous engagement through embankment soils. Interlocks shall be capable of accepting the specified sealant without reduction in engagement or structural integrity.
- E. Pile Length: As shown on the Drawings. Provide piles in full lengths without field splicing unless a specific splice detail is shown on the Drawings or approved in writing by the Engineer.
- F. Dimensional Tolerances (as-manufactured, per ASTM A857):
- Camber: 1/8 inch per 10 feet of length maximum.
 - Twist: 1/4 inch per 10 feet of length maximum.
- G. Substitutions: Pile sections from any manufacturer meeting or exceeding the minimum section properties specified in Paragraph C, and conforming to the material requirements of Paragraphs A and B, are acceptable. Submit product data demonstrating conformance prior to procurement. Do not order material prior to Engineer review of the submittal.

2.2 INTERLOCK SEALANT

- A. Provide an interlock sealant along the full driven depth of each pile to minimize seepage through interlock joints.
- B. Acceptable sealant types:
- Hydrophilic expanding foam or strip sealant, pre-applied to interlocks prior to driving.

- Bentonite-based rope or strip sealant, factory-applied or field-installed immediately prior to interlock engagement.
 - Manufacturer-proprietary interlock sealant system designed for use with the specific pile section furnished, subject to Engineer review.
- C. Sealant shall remain effective when exposed to soil moisture and groundwater during and after installation. Sealant shall not degrade, wash out, or lose sealing function under the groundwater conditions present at the site.
- D. Apply sealant in accordance with the product manufacturer's written installation instructions.

2.3 CORROSION PROTECTION

- A. Bare steel is acceptable for the fully buried cutoff wall application specified herein. No protective coating is required on pile surfaces below finished grade, provided no portion of the installed piling remains exposed above grade upon completion.
- B. Field-cut pile top surfaces shall be coated with a rust-inhibiting primer within 24 hours of cutting.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing site grades and conditions against the Contract Drawings prior to beginning installation. Report discrepancies to the Engineer before proceeding.
- B. Confirm that pile layout as shown on approved Shop Drawings does not conflict with existing utilities, drainage structures, or other improvements.
- C. Call 811 (New York 811) no less than 2 business days prior to any ground disturbance. Obtain utility clearance and comply with all applicable requirements prior to pile installation.

3.2 PREPARATION

- A. Establish working area grades to permit safe equipment access and to maintain pile alignment during driving. Do not create slopes or conditions that could destabilize the embankment during construction.
- B. Provide guide templates, walers, or bracing as required to maintain pile position and interlock engagement during driving. The template system shall maintain pile position within the tolerances specified in Article 3.05.
- C. Develop a written pile installation sequence and submit with Shop Drawings. Sequence piles to ensure interlocks can be engaged continuously along the wall without gaps.

3.3 INSTALLATION EQUIPMENT

- A. Driving equipment: Contractor's choice. Acceptable methods include vibratory hammer, impact hammer (diesel, hydraulic, or drop), hydraulic press-in (silent piler), or combination methods.
- B. Equipment shall be of sufficient capacity to advance piles to the tip elevations shown on the Drawings without damage to the pile section or interlock.
- C. Use appropriate leads, followers, or driving caps to protect pile tops from damage during driving.
- D. If driving resistance indicates a subsurface obstruction, stop driving and notify the Engineer before applying additional energy.

3.4 INSTALLATION

- A. Install sheet piling in accordance with the approved Shop Drawings, the Contract Drawings, and the pile manufacturer's written installation recommendations.
- B. Establish a starting pile at the location shown on the approved Shop Drawings. Drive progressively along the wall alignment, fully engaging interlocks prior to driving each successive pile.
- C. Ensure interlocks are clean and free of soil, debris, ice, or other material prior to engagement. Apply interlock sealant immediately prior to interlock engagement in accordance with the sealant manufacturer's instructions.
- D. Drive each pile to the tip elevation shown on the Drawings. Where driving resistance prevents achievement of the required tip elevation, halt driving and notify the Engineer immediately. Do not abandon driving or reduce pile length without written Engineer direction.
- E. Closing pile: Plan pile layout to close the wall with a full-section pile engaging interlocks on both adjacent piles. Notching, flame-cutting, or field modification of interlocks to force closure is not acceptable without prior written Engineer approval.
- F. Cut piles to the top-of-pile elevation shown on the Drawings after driving is complete. Cuts shall be perpendicular to the pile axis. Coat cut surfaces with rust-inhibiting primer within 24 hours of cutting.

3.5 TOLERANCES

- A. Plan Position: Top of pile within 3 inches of the plan location shown on the Drawings.

- B. Plumb: Pile shall be plumb within 1% of pile length in each principal direction.
- C. Top-of-Pile Elevation: Within +1 inch / -0 inches of the cutoff elevation shown on the Drawings.
- D. Tip Elevation: Tip shall achieve or exceed the minimum penetration shown on the Drawings. Driving beyond minimum tip depth is acceptable.
- E. Interlock Continuity: Full interlock engagement shall be maintained along the full driven depth of every pile. Partial or broken interlock engagement is not acceptable.

3.6 INSPECTION AND RECORDS

- A. The Engineer or Owner's Representative shall have the right to observe all pile installation operations without restriction.
- B. Maintain a pile driving log for each pile installed, recording:
 - Pile number (per approved Shop Drawing layout)
 - Pile section designation and heat number
 - Pile length as delivered and as installed
 - Top-of-pile elevation before and after cutoff
 - Tip elevation achieved
 - Driving equipment used
 - Date and time of installation
 - Any notable driving resistance, obstructions, refusals, or anomalies
- C. Submit completed pile driving logs to the Engineer within 5 business days of installation completion. Pile driving logs are a condition of final payment.

3.7 DEFECTIVE WORK

- A. Piles that cannot be driven to the required tip elevation, that show visible damage to the section or interlock, or that are installed out of the tolerances in Article 3.05 shall be reported to the Engineer immediately.
- B. Proposed corrective measures (supplemental piling, re-drive, modified method, or other remediation) shall be submitted in writing and approved by the Engineer before implementation.
- C. Cost of corrective work resulting from Contractor installation error, improper sequencing, or equipment damage shall be borne by the Contractor.

3.8 SITE RESTORATION

- A. Upon completion of pile installation and top-of-pile cutoff, restore working area grades to the elevations shown on the Drawings.
- B. Remove all pile cutoff material, driving equipment, temporary guides, and construction aids from the site.
- C. Steel cutoff material may be salvaged or recycled at the Contractor's discretion unless otherwise directed.

END OF SECTION 314113

SECTION 320117

PAVEMENT REPAIR AND RESURFACING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. This specification is applicable to pavement milling and overlay either with or without the use of a paving fabric saturated with asphalt cement between pavement layers.
- B. The function of the paving fabric is to act as a waterproofing and stress relieving membrane within the pavement structure.

1.2 RELATED SECTIONS

- A. Asphalt Concrete Paving: Section 321216.

1.3 REFERENCES

- A. American Association of State Highway and Transportation Officials (AASHTO) “Standard Specification for Geotextile Specification for Highway Applications” Designation M 288-05.
- B. American Society for Testing and Materials (ASTM):
 - 1. D 276 - Method for Identification of Fibers in Textiles (Melting Point).
 - 2. D 4354 - Practice for Sampling of Geosynthetics for Testing.
 - 3. D 4355 - Test Method for Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus).
 - 4. D 4439 - Terminology for Geotextiles.
 - 5. D 4533 - Test Method for Index Trapezoid Tearing Strength of Geotextiles.
 - 6. D 4632 - Test Method for Grab Breaking Load and Elongation of Geotextiles.
 - 7. D 4759 - Practice for Determining the Specification Conformance of Geosynthetics.
 - 8. D 4873 - Guide for Identification, Storage, and Handling of Geotextiles.
 - 9. D 5199 - Test Method for Measuring Nominal Thickness of Geotextiles and Geomembranes.
 - 10. D 5261 - Test Method for Measuring Mass per Unit Area of Geotextiles.

- C. Geosynthetic Accreditation Institute - Laboratory Accreditation Program (GAI-LAP).

1.4 DEFINITIONS

- A. Maximum Average Roll Value (MaxARV): Property value calculated as typical plus two standard deviations. Statistically, it yields a 97.7 percent degree of confidence that any sample taken during quality assurance testing will be below the value reported.

- B. Minimum Average Roll Value (MARV): Property value calculated as typical minus two standard deviations. Statistically, it yields a 97.7 percent degree of confidence that any sample taken during quality assurance testing will exceed value reported.
- C. Typical Roll Value: Property value calculated from average or mean obtained from test data.

1.5 SUBMITTALS

- A. Product Data: Manufacturer's name and brand name for the following:
 - 1. Asphalt filler:
 - a. Provider or Plant.
 - b. Composition.
 - 2. Asphalt emulsion:
 - a. Provider or Plant.
 - b. Composition.
 - 3. Geotextile:
 - a. Manufacturer.
 - b. Product Name.
 - c. Style.
 - d. Chemical Composition of the filaments or yarn in the Geotextile
 - 4. Asphalt Top Course:
 - a. Submit under Section 321216 Asphalt Concrete Paving Top Course.
- B. Quality Control Submittals:
 - 1. Asphalt Filler & Emulsion: Plant name and location of asphalt concrete supplier.
 - 2. Geotextile: Certification from Manufacturer that material meets MARV requirements and specifications.

1.6 QUALITY ASSURANCE

- A. Asphalt Filler & Emulsion: Comply with the applicable requirements of DOT Section 400-Bituminous Pavements.
- B. Geotextile:
 - 1. Manufacturing Quality Control (MQC) test results shall be provided upon request.
 - 2. Geotextiles shall be subject to sampling and testing to verify conformance with this specification. Sampling for testing shall be in accordance with ASTM D 4354.

3. Acceptance shall be in accordance with ASTM D 4759 based on testing of either conformance samples obtained using Procedure A of ASTM D 4354, or based on manufacturer's certifications and testing of quality control samples obtained using Procedure B of ASTM D 4354.
- C. Sewn Seams (if required):
1. For seams that are to be sewn in the field, provide at least a 2 meter (6 ft) length of sewn seam for sampling by the Director's Representative before the geotextile is installed.
 2. For seams that are sewn in the factory, the Director's Representative shall obtain samples of the factory seams at random from and roll of geotextile that is to be used on the project.
 3. If seams are to be sewn in both directions, samples of seams from both directions shall be provided.
 4. For seams that are field sewn, the seams sewn for sampling shall be sewn using the same equipment and procedures as will be used for the production seams.
 5. Do not expose geotextiles to elements over 14 days between installation and placement of cover.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Asphalt Filler: DOT Table 702-2 Asphalt Cements, Material Designation 702-0700.
- B. Asphalt Emulsion Tack Coat: DOT Section 702, Table 702-9, Material Designation 702-90.
- C. Asphalt Concrete Top Course: As specified in Section 321216.
- D. Geotextile For Pavement Overlay:
 1. PETROMAT® 4599 or PETROMAT PLUS-WHITE 4599, by Propex Operating Company, LLC, Chattanooga, Tennessee, 37419 USA, (800) 621-1273.
 2. TruPave Engineered Paving Mat by TenCate Geosynthetics North America, Pendergrass, Georgia, 30567, USA, (800) 685-9990
 3. GlasPave Paving Mat by Tensar International Corporation, Alpharetta, Georgia, 30009, USA, (800) 836-7271.
 4. US 90P by US Fabrics, Inc., Cincinnati, Ohio, 45227, USA, (800) 518-2290.
- E. Geotextile For Control Joint or Crack Bridging: Mirafi MTK Paving Fabric by TenCate Geosynthetics North America, Pendergrass, Georgia, 30567, USA, (800) 685-9990

PART 3 EXECUTION

3.1 PREPARATION

- A. Conditioning of Existing Pavement: Comply with DOT Section 633.
- B. Applying Asphalt Emulsion Tack Coat: Comply with DOT Section 407-3.

C. Cold Milling: Comply with DOT Section 490.

D. Geotextile: Comply with Manufacturers Installation Instructions and Requirements.

3.2 RESURFACING WITH ASPHALT CONCRETE

A. Lay asphalt concrete top course in accordance with Section 321216.

END OF SECTION 320117

SECTION 321216
ASPHALT PAVING

PART 1 GENERAL

1.1 REFERENCES

- A. New York State Department of Transportation (DOT) Specification section 400 dated January 1, 2023.
- B. AASHTO: M-288-17 Section A6, Paving Fabric.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Earthwork: Section 310000.

1.3 SUBMITTALS

- A. Product Data:
 - 1. Paving Synthetics: including Manufacturer's name, specifications, MSDS as required and installation instructions (including adhesion type and rate) for each item specified.
 - 2. Asphaltic Pavement: Include mix design from NYSDOT approved Batch Plant, Mix Design Test results that are less than 6 months old
- B. Batch plant name, NYSDOT Plant Number, and location of asphalt plant.
- C. Pavement Quality Control Submittals: Material Delivery Tickets
 - 1. At the time of delivery, a copy of the delivery ticket must be presented to the Director's Representative with the following minimum information:
 - a. Ticket Number.
 - b. Plant Identification.
 - c. Project Name.
 - d. Mix Type.
 - e. Quantity of material in vehicle.
 - f. Date and Time.

1.4 PROJECT CONDITIONS

- A. Environmental Requirements:
 - 1. Discontinue paving when surface temperatures fall below requirements listed in DOT Table 404-1 unless otherwise specified in the General Conditions of this Contract or as directed by the Director's Representative.

2. Do not place asphalt concrete on wet surfaces, or when weather conditions otherwise prevent the proper handling or finishing of bituminous mixtures as determined by the Director's Representative.
3. Pavement is restricted by dates listed in the General Conditions or by temperatures.

PART 2 PRODUCTS

2.1 MATERIALS

- A. All aggregate used in design mixes shall be as specified in DOT Specification Section 401-2.02 B.; Coarse Aggregate Type F2 Conditions.
- B. Asphalt: Use aggregate and PG binder from suppliers listed in the NYS DOT's Approved List for Fine and Coarse Aggregates and Performance Graded (PG) Binders for Warm Mix Asphalt (WMA) Technology for paving respectively. Use of mineral filler or any other materials for the production of asphalt will be accepted in accordance with the State's written instructions.
- C. Reclaimed Asphalt Pavement (RAP) will not be accepted.
- D. Asphalt Cement Tack Coat.

PART 3 EXECUTION

3.1 ASPHALT PAVING PLACEMENT & COMPACTION

- A. Prepare existing surfaces in accordance with DOT Section 404-3.05, *Conditioning of Existing Surface*.
- B. Apply Tack Coat in accordance with DOT Section 407-3.02, *Application of Tack Coat*, specifically Table 407-1 – Tack Coat Application Rates. The rates listed are recommended application rates for tack coat on various surfaces and may be modified by the Director's Representative.
- C. Spread and Finish asphalt in accordance with DOT Section 404-3.06, *Spreading and Finishing*.
- D. Provide compaction of asphalt in accordance with DOT Section 404-3.07, *Compaction*.
 1. Paragraph D. 80 Series Compaction Methods, specifically meeting the minimum requirements as shown in Table 404-3 Number of Passes. The Director's Representative may increase or decrease the number of passes to obtain adequate density of the compacted HMA.
 2. The Director's Representative may also approve alternate compaction procedures where the specified procedures are not applicable.
 3. Testing to be performed at the direction of and in locations chosen by the Director's Representative. Target compaction is 95% (92% - 97% range is acceptable).
- E. Asphalt joints shall be in accordance with DOT Section 404-3.09, *Joints*.

- F. Construct each pavement course to a 1/4" surface tolerance. The Director's Representative may test the surface with a 16-foot straight edge or string line placed parallel to the centerline of the pavement and with a 10-foot straight edge or string line placed transversely to the centerline of the pavement on any portion of the pavement. Variations exceeding 1/4 inch will be appropriately corrected or the pavement be removed and replaced at no additional cost to the State.
- G. The allowable thickness tolerance of all asphalt mixtures shall be:
1. 1/4 inch or less when the total nominal thickness indicated on the plans is 4 inches or less.
 2. 1/2 inch or less when the total nominal thickness is over 4 inches but not more than 8 inches.
 3. When the asphalt mixture is placed on newly constructed subbase material, an additional tolerance of 1/4 inch will be allowed both in the nominal thickness of the course placed directly on the subbase and the total pavement thickness.
- H. Remove and restore paved areas that are defective or contaminated as delineated by the Director's Representative at no additional cost to the State.
- I. Do not clean tools and equipment used for asphalt placement on the pavement surface, or near streams, ponds, drainage structures or other areas that are tributaries to waterways. Use an area approved by the Director's Representative for cleaning all paving equipment and tools.
- J. Once pavement cures for a minimum of 24 hours, apply pavement markings with mechanical equipment to a minimum wet film thickness of 15 mils (0.4 mm), or as specified by the Manufacturer if greater.

END OF SECTION 321216

SECTION 329120

TOPSOIL

PART 1 GENERAL

1.1 SUBMITTALS

- A. Material Test Reports: For imported or manufactured topsoil.

1.2 QUALITY ASSURANCE

- A. Topsoil used on this project shall be imported, tested, free of invasive species roots and seeds, and approved before placement.
- B. Soil Testing Laboratory Qualifications: An independent or university laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.
- C. Soil Analysis: For each unamended soil type, furnish soil analysis and a written report by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt and clay content; deleterious material; pH; and mineral and plant-nutrient content of the soil.
 - 1. Testing methods and written recommendations shall comply with USDA's Handbook No. 60.
 - 2. Report suitability of tested soil for plant growth.
 - a. Based upon the test results, state recommendations for soil treatments and soil amendments to be incorporated. State recommendations in weight per 1000 sf or volume per cu. yd. for nitrogen, phosphorous, and potash nutrients and soil amendments to be added to produce satisfactory planting soil suitable for healthy, viable plants and grasses.
- D. Secure approval before stripping topsoil from a borrow area or delivering topsoil to the project site.

PART 2 PRODUCTS

2.1 TOPSOIL

- A. Source: Imported.
 - 1. Provide topsoil from areas from which no topsoil has been taken previously and from areas which are producing, or have produced fair to good yield farm crops without unusual fertilization for a minimum period of 10 years, or from arable or cultivable areas supplied with good normal drainage.
- B. Provide topsoil conforming to the following:

1. Original loam topsoil, well drained homogeneous texture and of uniform grade, without the admixture of subsoil material and entirely free of dense material, hardpan, sod, or any other objectionable foreign material.
2. Containing not less than 5 percent nor more than 20 percent organic matter in that portion of a sample passing a 1/4 inch sieve when determined by the wet combustion method on a sample dried at 105 degrees C.
3. Containing a Ph value within the range of 6.5 to 7.5 on that portion of the sample which passes a 1/4 inch sieve.
4. Containing the following gradations:

| SIEVE DESIGNATION | PERCENT PASSING |
|-------------------|---------------------------------|
| 1 inch | 100 |
| 1/4 inch | 97 - 100 |
| No. 10 | 40-100 |
| No. 40 | 15-50 |
| No. 200 | 10 - 20 (of the 1/4 inch sieve) |

2.2 LIMESTONE

- A. Provide ground limestone in the producer's standard bags containing not less than 90 percent of calcium and magnesium carbonates equivalent to not less than 45 percent of the mixed oxides of calcium and magnesium and conforming to the following gradations:

| SIEVE DESIGNATION | PERCENT PASSING |
|-------------------|-----------------|
| No. 100 | 50 - 100 |
| No. 20 | 100 |

PART 3 EXECUTION

3.1 PREPARATION

- A. Grub out and remove all vegetation in the area of the approved topsoil source.

3.2 SPREADING TOPSOIL

- A. Perform topsoil spreading operations only during dry weather.
- B. To insure a proper bond with the topsoil, harrow or otherwise loosen the subgrade to a depth of 6 inches before spreading topsoil.
- C. Spread topsoil directly upon prepared subgrade to a minimum depth measuring:4 inches for seed areas
- D. Depth after natural settlement in areas to be seeded: In sodded areas the thickness of the topsoil after natural settlement shall equal 4 inches. Smooth out unsightly variations, bumps, ridges, and depressions which will hold water. Remove stones, litter, or other objectionable material. Finished surfaces shall conform to the contour lines and elevations indicated on the drawings or fixed by the Owner's Representative.

3.3 SPREADING LIMESTONE

- A. Spread ground limestone evenly over the topsoiled surface. Incorporate limestone within the top 2 inches of soil prior to finish raking.
- B. Apply limestone at the following rate per 1000 sq ft of topsoil area, corresponding to the hydrogen ion concentration (Ph) shown by the soil chemical analysis:

| PH | RATE (pounds) |
|------------|----------------------|
| 6.5 to 6.8 | 25 |
| over 6.8 | 0 |

END OF SECTION-329120

SECTION 329219

SEEDING

PART 1 GENERAL

1.1 SUBMITTALS

- A. Product Data; Hydro Mulch: Manufacturer's specifications and application rate.
- B. Sample: One pound of seed in vendor's unopened package with label and seed analysis.

1.2 DELIVERY STORAGE AND HANDLING

- A. Deliver fertilizer in manufacturer's standard size bags or cartons showing weight, analysis, and the name of the manufacturer. Store as approved by Owner's Representative.
- B. Deliver seeds, 30 days in advance of anticipated use, in vendor's unopened packages bearing labels showing vendor's name and seed analysis by weight.

1.4 SCHEDULING

- A. Time For Seeding: Sow grass seed between April 1st and May 15th or between August 1st and October 1st, except as otherwise approved in writing by the Owner.

PART 2 PRODUCTS

2.1 FERTILIZER

- A. Fertilizer: Mixed commercial fertilizers shall contain total nitrogen, available phosphoric acid and soluble potash in the ratio of 10-0-4 (50% N/UF). 50% of total nitrogen shall be derived from ureaform furnishing a minimum of 3.5% water insoluble nitrogen (3.5% WIN). The balance of the nitrogen shall be present as methylene urea, water soluble urea, nitrate and ammoniacal compounds.
- B. Other fertilizers meeting NYSDOT Specification Section 713-03 Fertilizer can be used.

2.2 LAWN SEED

- A. Furnish fresh, clean, new-crop seed mixed in the proportions specified for species and variety, and conforming to Federal and State Standards.
- B. Acceptable material in a seed mixture other than pure live seed consists of nonviable seed, chaff, hulls, live seed of crop plants and inert matter. The percentage of weed seed shall not exceed 0.1 percent by weight.

C. All seed will be rejected if the label or test analysis indicates any of the following contaminants: Timothy, Orchard Grass, Sheep Fescue, Meadow Fescue, Canada Blue Grass, Alta Fescue, Kentucky 31 Fescue, and Bent Grass.

D. Provide the following seed mixture:

A = Min. Percentage of Germination

B = Min. Purity Percentage

C = Weight Pure Live Seed in Mixture

| Name | Variety | A | B | C |
|--|--|----|----|----|
| Chewings Fescue (Festuca rubra commutata) | Banner, Highlight, Jamestown, or an approved equal. | 85 | 97 | 25 |
| Kentucky Bluegrass * (Poa pratensis) | Barron, Flyking, Glade, or an approved equal. | 80 | 95 | 50 |
| Perennial Ryegrass ** (Lolium perenne) | Manhattan II, Pennfine, Yorktown II, or an approved equal. | 90 | 98 | 25 |

*Approximately equal proportions of 2 or more improved Bluegrass varieties as listed in the Cornell Recommendations for Turfgrass.

**One or more of the improved Ryegrass varieties as listed in the Cornell Recommendations for Turfgrass.

2.3 CONSERVATION SEEDS

A. N/A

2.4 MULCH

A. Dry Application, Straw: Stalks of oats, wheat, rye or other approved crops which are free of noxious weeds. Weight shall be based on a 15 percent moisture content.

B. Hydro Application: Colored wood cellulose fiber product specifically designed for use as a hydro-mechanical applied mulch. Acceptable Product: Conwed Hydro Mulch, Conwed Fibers, 231 4th Street SW, Hickory, NC.

PART 3 EXECUTION

3.1 PREPARATION

A. Seed Bed: Scarify soil to a depth of 3 inches in compacted areas. Smooth out unsightly variations, bumps, ridges, and depressions which will hold water. Remove stones, litter, or other objectionable material.

1. Obtain written approval of seed bed from the Owner's Representative before commencing seeding operations.

3.2 FERTILIZING

- A. Fertilize and adjust soil characteristics per recommendations of lab soil analysis for each seed mix.

3.3 SEEDING

- A. Assume all risks when seed is sowed before approval of seed analysis.
- B. Do not seed when the wind velocity exceeds 5 miles per hour.
- C. Application Rate:
 - 1. 6 pounds per 1,000 sq. ft. minimum.
- D. Dry Application: Sow seed evenly by hand or seed spreader on dry or moderately dry soil.
- E. Hydroseeding:
 - 1. Apply seeding materials with an approved hydroseeder.
 - 2. Fill tank with water and agitate while adding seeding materials. Use sufficient fertilizer, mulch, and seed to obtain the specified application rate. Add seed to the tank after the fertilizer and mulch have been added. Maintain constant agitation to keep contents in homogeneous suspension. Prolonged delays in application or agitation that may be injurious to the seed will be the basis of rejection.
 - 3. Distribute uniformly a slurry mixture of water, seed, fertilizer, and mulch at a minimum rate of 57 gallons per 1000 sq ft (2500 gallons per acre). The Owner's Representative may order the amount of water increased if distribution of seeding materials is not uniform.

3.4 MULCHING

- A. Dry Application: Within one day after seeding, cover the seeded areas with a uniform blanket of straw mulch at the rate of 100 pounds per 1000 sq ft of seeded area.
- B. Hydro Application: Apply approved mulch in accordance with the manufacturer's written instructions and recommended rates of application.

3.5 LAWN ESTABLISHMENT

- A. Maintain the grass at heights between 2-1/2 inches and 3-1/2 inches on a weekly basis until the physical completion of the Work.
- B. Water and protect all seeded areas until final acceptance of the lawn.

3.6 FINAL ACCEPTANCE

- A. Final acceptance of lawn or native grass areas will be granted when a uniform stand of acceptable grass is obtained, with a minimum of 95 percent coverage. Portions of the lawn or native grass areas may be accepted at various times at the discretion of the Owner's Representative.
- B. Unacceptable lawn: Reseed as specified and fertilized at one-half the specified rate.
- C. At the physical completion of the Work, the owner will assume maintenance responsibilities of the lawn areas.

END OF SECTION - 329219

SECTION 329300

PLANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Plants.
 - 2. Planting soils.
 - 3. Tree stabilization.
- B. Related Requirements:
 - 1. Earthwork: Section 31 00 00.
 - 2. Seeding: Section 32 92 19.

1.3 DEFINITIONS

- A. Backfill: The earth used to replace or the act of replacing earth in an excavation.
- B. Balled and Burlapped Stock: Plants dug with firm, natural balls of earth in which they were grown, with a ball size not less than diameter and depth recommended by ANSI Z60.1 for type and size of plant required; wrapped with burlap, tied, rigidly supported, and drum laced with twine with the root flare visible at the surface of the ball as recommended by ANSI Z60.1.
- C. Balled and Potted Stock: Plants dug with firm, natural balls of earth in which they are grown and placed, unbroken, in a container. Ball size is not less than diameter and depth recommended by ANSI Z60.1 for type and size of plant required.
- D. Container-Grown Stock: Healthy, vigorous, well-rooted plants grown in a container, with a well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for type and size of plant required.
- E. Finish Grade: Elevation of finished surface of planting soil.
- F. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.

- G. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also include substances or mixtures intended for use as a plant regulator, defoliant, or desiccant. Some sources classify herbicides separately from pesticides.
- H. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- I. Planting Area: Areas to be planted.
- J. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- K. Plant; Plants; Plant Material: These terms refer to vegetation in general, including trees, shrubs, vines, ground covers, ornamental grasses, bulbs, corms, tubers, or herbaceous vegetation.
- L. Root Flare: Also called "trunk flare." The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and the stem or trunk.
- M. Stem Girdling Roots: Roots that encircle the stems (trunks) of trees below the soil surface.
- N. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Plant Materials: Include quantities, sizes, quality, and sources for plant materials.
- B. Samples for Verification: For each of the following:
 - 1. Organic Mulch: 1-pint volume of each organic mulch required; in sealed plastic bags labeled with composition of materials by percentage of weight and source of mulch. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of color, texture, and organic makeup.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For landscape Installer. Include list of similar projects completed by Installer demonstrating Installer's capabilities and experience. Include project names, addresses, and year completed, and include names and addresses of owners' contact persons.
- B. Product Certificates: For each type of manufactured product, from manufacturer, and complying with the following:
 - 1. Manufacturer's certified analysis of standard products.

- C. Pesticides and Herbicides: Product label and manufacturer's application instructions specific to Project.
- D. Sample Warranty: For special warranty.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer who has completed five or more landscaping projects similar in material, design, value, and extent to that indicated for this Project and with a record of successful grass and landscape establishment.
 - 1. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on the Project site during times that grass planting and landscaping are in progress. Field supervisor shall have had a supervisory role on a minimum of five projects of comparable scope.
- B. Provide quality, size, genus, species, and variety of plants indicated, complying with applicable requirements in ANSI Z60.1.
- C. Measurements: Measure according to ANSI Z60.1. Do not prune to obtain required sizes.
 - 1. Trees and Shrubs: Measure with branches and trunks or canes in their normal position. Take height measurements from or near the top of the root flare for field-grown stock and container-grown stock. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip to tip. Take caliper measurements 6 inches above the root flare for trees up to 4-inch caliper size, and 12 inches above the root flare for larger sizes.
- D. Plant Material Observation: Engineer may observe plant material either at place of growth or at site before planting for compliance with requirements for genus, species, variety, cultivar, size, and quality. Engineer may also observe trees and shrubs further for size and condition of balls and root systems, pests, disease symptoms, injuries, and latent defects and may reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.
 - 1. Notify Engineer of sources of planting materials seven days in advance of delivery to site.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws if applicable.
- B. Bulk Materials:
 - 1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.

2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
 3. Accompany each delivery of bulk materials with appropriate certificates.
- C. Do not prune trees before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.
- D. Handle planting stock by root ball.
- E. Apply antidesiccant to trees using power spray to provide an adequate film over trunks (before wrapping), branches, stems, twigs, and foliage to protect during digging, handling, and transportation.
1. If deciduous trees are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.
- F. Wrap trees with burlap fabric over trunks, branches, stems, twigs, and foliage to protect from wind and other damage during digging, handling, and transportation.
- G. Deliver plants after preparations for planting have been completed, and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist.
1. Heel-in bare-root stock. Soak roots that are in less than moist condition in water for two hours. Reject plants with dry roots.
 2. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
 3. Do not remove container-grown stock from containers before time of planting.
 4. Water root systems of plants stored on-site deeply and thoroughly with a fine-mist spray. Water as often as necessary to maintain root systems in a moist, but not overly wet condition.

1.8 FIELD CONDITIONS

- A. Field Measurements: Verify actual grade elevations, service and utility locations, irrigation system components, and dimensions of plantings and construction contiguous with new plantings by field measurements before proceeding with planting work.
- B. Interruption of Existing Services or Utilities: Do not interrupt services or utilities to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary services or utilities according to requirements indicated:
1. Notify Engineer no fewer than two days in advance of proposed interruption of each service or utility.
 2. Do not proceed with interruption of services or utilities without Architect's written permission.

- C. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.
 - 1. Spring Planting: March 15th to June 15th
 - 2. Fall Planting: August 15th to October 15th
- D. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.
- E. Coordination with Turf Areas (Lawns): Plant trees, shrubs, and other plants after finish grades are established and before planting turf areas unless otherwise indicated.
 - 1. When planting trees, shrubs, and other plants after planting turf areas, protect turf areas, and promptly repair damage caused by planting operations.

1.9 WATER SUPPLY FOR LANDSCAPE ESTABLISHMENT AND MAINTENANCE

- A. The Contractor shall be responsible for furnishing and supplying water for all turf and plant bed areas until final project acceptance.
- B. If the Contractor utilizes the Director's water supply during the landscape establishment and maintenance period, the Contractor shall be responsible to pay all usage fees and costs associated with the water usage.

1.10 WARRANTY

- A. Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner.
 - b. Structural failures including plantings falling or blowing over.
 - 2. Warranty Periods: From date of one year after Substantial Completion and acceptance of entire project:
 - a. Plant Material : 12 months.
 - 3. Include the following remedial actions as a minimum:
 - a. Immediately remove dead plants and replace unless required to plant in the succeeding planting season.
 - b. Replace plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
 - c. A limit of one replacement of each plant is required except for losses or replacements due to failure to comply with requirements.

- d. Provide extended warranty for period equal to original warranty period, for replaced plant material.

PART 2 - PRODUCTS

2.1 TREE AND SHRUB MATERIAL

- A. General: Furnish nursery-grown trees and shrubs conforming to ANSI Z60.1, with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
- B. Grade: Provide trees and shrubs of sizes and grades conforming to ANSI Z60.1 for type of trees and shrubs required. Trees and shrubs of a larger size may be used if acceptable to Director's Representative, with a proportionate increase in size of roots or balls.
- C. Label each tree and shrub with securely attached, waterproof tag bearing legible designation of botanical and common name.

2.2 SHADE AND FLOWERING TREES

- A. Shade Trees: Single-stem trees with straight trunk, well-balanced crown, and intact leader, of height and caliper indicated, conforming to ANSI Z60.1 for type of trees required.
 1. Branching Height: 1/3 to 1/2 of tree height.
- B. Small Trees: Small upright or spreading type, branched or pruned naturally according to species and type, and with relationship of caliper, height, and branching recommended by ANSI Z60.1.
- C. Provide balled and burlapped trees.

2.3 DECIDUOUS SHRUBS

- A. Form and Size: Deciduous shrubs with not less than the minimum number of canes required by and measured according to ANSI Z60.1 for type, shape, and height of shrub.
- B. Provide balled and burlapped deciduous shrubs.
 1. Container-grown deciduous shrubs will be acceptable in lieu of balled and burlapped deciduous shrubs subject to meeting ANSI Z60.1 limitations for container stock.

2.4 HERBACEOUS PERENNIALS, ORNAMENTAL GRASSES, AND GROUNDCOVERS

- A. Form and Size: Shall comply with ANSI Z60.1 for type, shape, and height of each type of herbaceous perennial, ornamental grass, and groundcover.
- B. All container grown plants shall be healthy, vigorous, well rooted, and established in the container in which they are growing. A container grown plant shall have a well-established

root system reaching the sides of the container to maintain a firm root ball but shall not have excessive root growth encircling the inside of the container.

2.5 INORGANIC SOIL AMENDMENTS

- A. Lime: ASTM C 602, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent and as follows:
 - 1. Class: T, with a minimum of 99 percent passing through No. 8 sieve and a minimum of 75 percent passing through No. 60 sieve.
 - 2. Class: O, with a minimum of 95 percent passing through No. 8 sieve and a minimum of 55 percent passing through No. 60 sieve.
 - 3. Provide lime in form of ground dolomitic limestone.
- B. Aluminum Sulfate: Commercial grade, unadulterated.
- C. Perlite: Horticultural perlite, soil amendment grade.
- D. Agricultural Gypsum: Minimum 90 percent calcium sulfate, finely ground with 90 percent passing through No. 50 sieve.

2.6 ORGANIC SOIL AMENDMENTS

- A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 - 1. Organic Matter Content: 50 to 60 percent of dry weight.
 - 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.
- B. Sphagnum Peat: Partially decomposed sphagnum peat moss, finely divided or granular texture, with a pH range of 3.4 to 4.8.
- C. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, debris, and material harmful to plant growth.

2.7 FERTILIZERS

- A. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
- B. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
 - 1. Composition: 1 lb/1000 sq. ft. of actual nitrogen, 0 percent phosphorous, and 2 percent potassium, by weight.

2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.
- C. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
1. Composition: 20 percent nitrogen, 0 percent phosphorous, and 10 percent potassium, by weight.
 2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

2.8 PLANTING SOILS

- A. Planting Soil: Provide topsoil from areas from which no topsoil has been taken previously and from areas which are producing, or have produced fair to good yield farm crops without unusual fertilization for a minimum period of 10 years, or from arable or cultivable areas supplied with good normal drainage.
1. Source: Provide topsoil from existing stockpiles stripped from the project site and approved by the Engineer. Provide appropriate material testing data.
 2. Provide topsoil conforming to the following:
 - a. Original loam topsoil, well drained homogeneous texture and of uniform grade, without the admixture of subsoil material and entirely free of dense material, hardpan, sod, or any other objectionable foreign material.
 - b. Containing not less than 5 percent nor more than 20 percent organic matter in that portion of a sample passing a 1/4 inch sieve when determined by the wet combustion method on a sample dried at 105 degrees C.
 - c. Containing a Ph value within the range of 6.5 to 7.5 on that portion of the sample which passes a 1/4 inch sieve.
 - d. Containing the following gradations:

| SIEVE DESIGNATION | PERCENT PASSING |
|-------------------|---------------------------------|
| 1 inch | 100 |
| 1/4 inch | 97 - 100 |
| No. 200 | 20 - 60 (of the 1/4 inch sieve) |

2.9 LIMESTONE

- A. Provide ground limestone in the producer's standard bags containing not less than 90 percent of calcium and magnesium carbonates equivalent to not less than 45 percent of the mixed oxides of calcium and magnesium and conforming to the following gradations:

| SIEVE DESIGNATION | PERCENT PASSING |
|-------------------|-----------------|
| No. 100 | 50 - 100 |
| No. 20 | 100 |

2.10 MULCHES

- A. Organic Mulch: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:
 - 1. Type: Shredded hardwood.
 - 2. Size Range: 3 inches maximum, 1/2 inch minimum.
 - 3. Color: Natural.

2.11 PESTICIDES

- A. General: Pesticide registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.
- B. Pre-Emergent Herbicide (Selective and Nonselective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.
- C. Post-Emergent Herbicide (Selective and Nonselective): Effective for controlling weed growth that has already germinated.

2.12 MISCELLANEOUS PRODUCTS

- A. Antidesiccant: Water-insoluble emulsion, permeable moisture retarder, film forming, for trees. Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's written instructions.
- B. Burlap: Non-synthetic, biodegradable.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive plants, with Installer present, for compliance with requirements and conditions affecting installation and performance of the Work.
 - 1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
 - 2. Verify that plants and vehicles loaded with plants can travel to planting locations with adequate overhead clearance.
 - 3. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
 - 4. Uniformly moisten excessively dry soil that is not workable or which is dusty.

- B. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Engineer and replace with new planting soil.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by planting operations.
- B. Lay out individual tree locations and areas for multiple plantings. Stake locations, outline areas, adjust locations when requested, and obtain Engineer’s acceptance of layout before excavating or planting. Make minor adjustments as required.
- C. Wrap trees and shrubs with burlap fabric over trunks, branches, stems, twigs, and foliage to protect from wind and other damage during digging, handling, and transportation.

3.3 SPREADING TOPSOIL

- A. Perform topsoil spreading operations only during dry weather.
- B. To insure a proper bond with the topsoil, harrow or otherwise loosen the subgrade to a depth of 6 inches before spreading topsoil.
- C. Spread topsoil directly upon prepared subgrade to a specified in section 329300 ‘Topsoil’ after natural settlement in areas to be seeded. Smooth out unsightly variations, bumps, ridges, and depressions which will hold water. Remove stones, litter, or other objectionable material. Finished surfaces shall conform to the contour lines and elevations indicated on the drawings or fixed by the Director’s Representative

3.4 SPREADING LIMESTONE

- A. Spread ground limestone evenly over the top-soiled surface. Incorporate limestone within the top 2 inches of soil prior to finish raking.
- B. Apply limestone at the following rate per 1000 sq ft of topsoil area, corresponding to the hydrogen ion concentration (Ph) shown by the soil chemical analysis:

| PH | RATE (pounds) |
|------------|---------------|
| 6.5 to 6.8 | 25 |
| over 6.8 | 0 |

3.5 PLANTING AREA ESTABLISHMENT

- A. Perform topsoil spreading operations only during dry weather.

- B. Loosen subgrade of planting areas to a minimum depth of 4 inches. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
 - 1. Spread planting soil to specified in section 329300 'Topsoil' but not less than required to meet finish grades after natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
 - a. Spread approximately one-half the thickness of planting soil over loosened subgrade. Mix thoroughly into top 2 inches of subgrade. Spread remainder of planting soil.
- C. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.
- D. Before planting, obtain Engineer's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.6 EXCAVATION FOR TREES AND SHRUBS

- A. Planting Pits: Excavate planting pits as indicated on the Drawings.
 - 1. Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.
 - 2. If area under the plant was initially dug too deep, add soil to raise it to the correct level and thoroughly tamp the added soil to prevent settling.
 - 3. Maintain supervision of excavations during working hours.
- B. Backfill Soil: Subsoil and topsoil removed from excavations may not be used as backfill soil unless otherwise indicated.
- C. Obstructions: Notify Engineer if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.
- D. Drainage: Notify Engineer if subsoil conditions evidence unexpected water seepage or retention in tree or shrub planting pits.
- E. Fill excavations with water and allow to percolate away before positioning trees and shrubs.

3.7 TREE AND SHRUB PLANTING

- A. Inspection: Before planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.
- B. Roots: Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.
- C. Balled and Burlapped Stock: Set each plant plumb and in center of planting pit or trench with root flare 1 inch above adjacent finish grades.

1. Backfill: Planting soil.
 2. After placing some backfill around root ball to stabilize plant, carefully cut and remove burlap, rope, and wire baskets from tops of root balls and from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
 3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
 4. Continue backfilling process. Water again after placing and tamping final layer of soil.
- D. Container-Grown Stock: Set each plant plumb and in center of planting pit or trench with root flare 1 inch above adjacent finish grades.
1. Backfill: Planting soil.
 2. Carefully remove root ball from container without damaging root ball or plant.
 3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
 4. Continue backfilling process. Water again after placing and tamping final layer of soil.

3.8 TREE AND SHRUB PRUNING

- A. Prune, thin, and shape trees, shrubs, and vines according to standard professional horticultural and arboricultural practices. Unless otherwise indicated by Engineer, do not cut tree leaders; remove only injured, dying, or dead branches from trees and shrubs; and prune to retain natural character.
- B. Do not apply pruning paint to wounds.

3.9 TREE STABILIZATION

- A. Install trunk stabilization as indicated on the contract drawings.

3.10 PLANTING AREA MULCHING

- A. Mulch backfilled surfaces of planting areas and other areas indicated.
 1. Trees and Treelike Shrubs in Turf Areas: Apply organic mulch ring of 3-inch average thickness, with 36-inch radius around trunks or stems. Do not place mulch within 3 inches of trunks or stems.
 2. Organic Mulch in Planting Areas: Apply 3-inch average thickness of organic mulch over whole surface of planting area, and finish level with adjacent finish grades. Do not place mulch within 3 inches of trunks or stems.

3.11 PLANT MAINTENANCE

- A. Maintain plantings by pruning, cultivating, watering for 60 days, weeding, fertilizing, mulching, restoring planting saucers, adjusting and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings.
- B. Fill in, as necessary, soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.
- C. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices when possible to minimize use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.

3.12 PESTICIDE APPLICATION

- A. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.
- B. Pre-Emergent Herbicides (Selective and Nonselective): Apply to tree, shrub, and ground-cover areas according to manufacturer's written recommendations. Do not apply to seeded areas.
- C. Post-Emergent Herbicides (Selective and Nonselective): Apply only as necessary to treat already-germinated weeds and according to manufacturer's written recommendations.

3.13 REPAIR AND REPLACEMENT

- A. General: Repair or replace existing or new trees and other plants that are damaged by construction operations, in a manner approved by Engineer.
 - 1. Submit details of proposed pruning and repairs.
 - 2. Perform repairs of damaged trunks, branches, and roots within 24 hours, if approved.
 - 3. Replace trees and other plants that cannot be repaired and restored to full-growth status, as determined by Engineer.
- B. Remove and replace trees that are more than 25 percent dead or in an unhealthy condition before the end of the corrections period or are damaged during construction operations that Architect determines are incapable of restoring to normal growth pattern.
 - 1. Provide new trees of same size as those being replaced for each tree of 6 inches or smaller in caliper size.
 - 2. Species of Replacement Trees: Same species being replaced.

3.14 CLEANING AND PROTECTION

- A. During planting, keep adjacent paving and construction clean and work area in an orderly condition. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Remove surplus soil and waste material including excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Owner's property.
- C. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.
- D. After installation and before Substantial Completion, remove nursery tags, nursery stakes, tie tape, labels, wire, burlap, and other debris from plant material, planting areas, and Project site.

3.15 DISPOSAL

- A. Remove surplus soil and waste material including excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Owner's property.

END OF SECTION

SECTION 333913

PRECAST CONCRETE STRUCTURES

PART 1 GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

- A. Earthwork: Section 310000.
- B. Corrugated Polyethylene Storm Drain Pipe: Section 334104.

1.2 REQUIREMENTS OF REGULATORY AGENCIES

- A. Obtain necessary permits from local Authorities. Ascertain and comply with local requirements for materials, construction, and restoration of pavement.

1.3 SUBMITTALS

- A. Shop Drawings: Show fabrication details and connections to adjacent Work.
- B. Product Data: Manufacturer's catalog cuts, specifications, and installation instructions.

PART 2 PRODUCTS

2.1 MATERIALS

A. Precast Reinforced Concrete Manholes:

1. Riser Sections: ASTM C 478.
2. Joints Between Riser Sections-One of the following:
 - a. Rubber Gaskets: ASTM C 443.
 - b. Butyl Joint Sealant: ConSeal CS-202 by Concrete Sealants, Inc., 8917 S. Palmer Rd., P. O. Box 176, New Carlisle, OH 45344, (513) 845-8776.
 - c. Or approved equal.
3. Exterior Joint Wrap: Wrap exterior side of all joints on each structure with Bidco External Joint Wrap, 12" wide, butyl based, self-healing, self-priming sealant by Trelleborg, or approved equal.
4. Concrete for Precast Units: Air content 6 percent by volume with an allowable tolerance of plus or minus 1.5 percent. Minimum compressive strength of 4,000 psi after 28 days. Submit concrete mix design prior to fabrication.
5. Load Rating: AASHTO HS-20 with 30% impact and 130 lb/cf equivalent soil pressure.
6. Bituminous coating on inside and outside of all sanitary sewer manholes.

B. Frames and Covers for Manholes:

1. Design of each shall be the same throughout the project unless otherwise specified or indicated on the drawings.
2. Units shall meet AASHTO H20 wheel loading requirements. Manufacture, workmanship, and certified proof-load tests shall conform to AASHTO M306-89-Standard Specification for Drainage Structure Castings.
3. Material:
 - a. Cast iron: ASTM A48, Class 30B or 35B.
 - b. Delivered to Site free of any coatings, unless otherwise specified.
4. Frames:
 - a. Round with a 30-inch clear opening.
5. Covers:
 - a. Round.
 - b. Solid lid, top surface checkered and provided with suitable concealed lifting notches, and lettering cast into cover to indicate type of structure.

H. Pipe-to-Manhole/Drainage Structure Connections:

1. Kor-N-Seal Flexible Connector by NPC, Inc., 106/406 Series Pipe-to-Manhole Connector or approved equal.

I. Mortar: ASTM C 270, Type M.

PART 3 EXECUTION

3.1 PREPARATION

- A. Openings in Precast and Cast-in-Place Concrete Risers: Provide openings and install pipe connectors in strict accordance with the recommendation of the connector manufacturer.

3.2 INSTALLATION

- A. Construct concrete structures with precast reinforced riser sections to the dimensions shown. Seal joints between precast riser sections with material specified.
 1. Wall thickness for circular structures 12 feet deep or less: 5 inches.
 2. Wall thickness for circular structures greater than 12 feet deep: 6 inches.
- B. Position tops of structures flush with finished grade.

END OF SECTION 333913

SECTION 334104

STORM DRAIN PIPE

PART 1 GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

- A. Earthwork: Section 310000.

1.2 SUBMITTALS

- A. Product Data: Manufacturer's specifications (AASHTO M-252 or AASHTO M-294), including dimensions, allowable height of cover information, and installation instructions.

PART 2 PRODUCT

HIGH-DENSITY POLYETHYLENE (HDPE) STORM DRAINPIPE AND FITTINGS

2.1 GENERAL

- A. Provide 18-inch dual-wall HDPE pipe with corrugated exterior and smooth interior, with watertight bell-and-spigot joints.
- B. Pipe and fittings shall be the product of a single manufacturer.
- C. Acceptable manufacturers: Advanced Drainage Systems (ADS) N-12 WT IB, Prinsco Goldflo WT, Lane Enterprises Hi-Q, or approval equal.

2.2 MATERIALS

- A. Pipe and fittings shall be manufactured from virgin high-density polyethylene conforming to ASTM D3350, cell classification 435400C or higher.

2.3 PIPE STANDARD

- A. Pipe shall conform to AASHTO M294, Type S.
- B. Joints shall be watertight, conforming to ASTM D3212, with factory-installed elastomeric gaskets meeting ASTM F477.

2.4 FITTINGS

- A. Fitting shall be of the same material and manufacturer as the pipe, and shall conform to AASHTO M294.
- B. Provide molded or fabricated fittings for all bends, tees, reducers, end caps, and transitions shown on the Drawings.
- C. Fabricated fittings shall be joined by extrusion welding or thermal fusion. Solvent-welded fittings are not permitted.
- D. Fittings shall have the same watertight joint system as the mainline pipe.

2.5 CONNECTIONS TO STRUCTURES

- A. Connections to manholes and catch basins shall be made with a flexible, watertight pipe-to-structure connector (kor-N-Seal, A-Lok, or approved equal), installed per the manufacturer's instructions.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Laying: Lay pipe to indicated line and grade with a firm uniform bearing for the entire length of the pipe. Fill excess excavation with suitable materials and tamp.
- B. Joints: Install coupling and fasten per manufacturer's instructions.
- C. Connections:
 - 1. Make connections to existing drainage structures by core drilling the wall of the drainage structure with neat clean edge.

END OF SECTION-334104